SUPERIOR OPTO-MECHANICAL SOFTWARE

TracePro

Lambda Research Corporation

Installation Guide
Release 7.0

Revision 10/13/10

Lambda Research Corporation

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Contents

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BEFORE INSTALLATION

Impact on Existing Installations of TracePro

- TracePro 7.0 is installed in a separate directory, and will not impact any existing installations of TracePro (e.g. – 6.0.x, 5.0.x,, etc).

- The TracePro 7.0 release requires an updated license from TracePro 6.0.x or older.

- TracePro 7.0.x releases will overwrite previous 7.0.x releases. All TracePro 7.0.x releases run from the same license.

System Requirements

Operating system	Windows XP (32 and 64-bit) Windows Vista (32 and 64-bit) Windows 7 (32 and 64-bit)
Recommended operating system	Windows 7 64-bit
Recommended processor	recent 64-bit processor with as many cores as possible
Minimum RAM	Windows XP: 512 MB Windows Vista: 2 GB Windows 7: 2 GB Windows XP 64: 1 GB Windows Vista 64: 2 GB Windows 7 64: 2 GB
Recommended RAM	as much as possible
Disk space required for installation	700 MB

INSTALLATION

Installation Media

Downloading from the Lambda Research Website

TracePro® and additional support programs and documentation are available from the Lambda Research Corporation website.   Please go to

http://www.lambdares.com/technical_support/tracepro/releases/

and select the link for the Current TracePro Release (select 32-bit or 64-bit consistent with the Windows Operating System).

Note: A Username and Password are required to access the Technical Support section of the website, and a Lambda Research Website Serial Number is required to register and establish the Username and Password. Assistance obtaining Website Serial Numbers is available from license@lambdares.com.

Save the Installer.exe file to a convenient location on your PC.

Double-click on the Installer.exe file to begin the installation

CD-ROM

TracePro® is also available from a CD-ROM. After the TracePro CD is inserted into the drive, browse to the CD-Drive, then double-click on TracePro…Installer.exe file to start the installation.

TracePro Installation

License Agreement

After double-clicking on the Installer.exe file …..
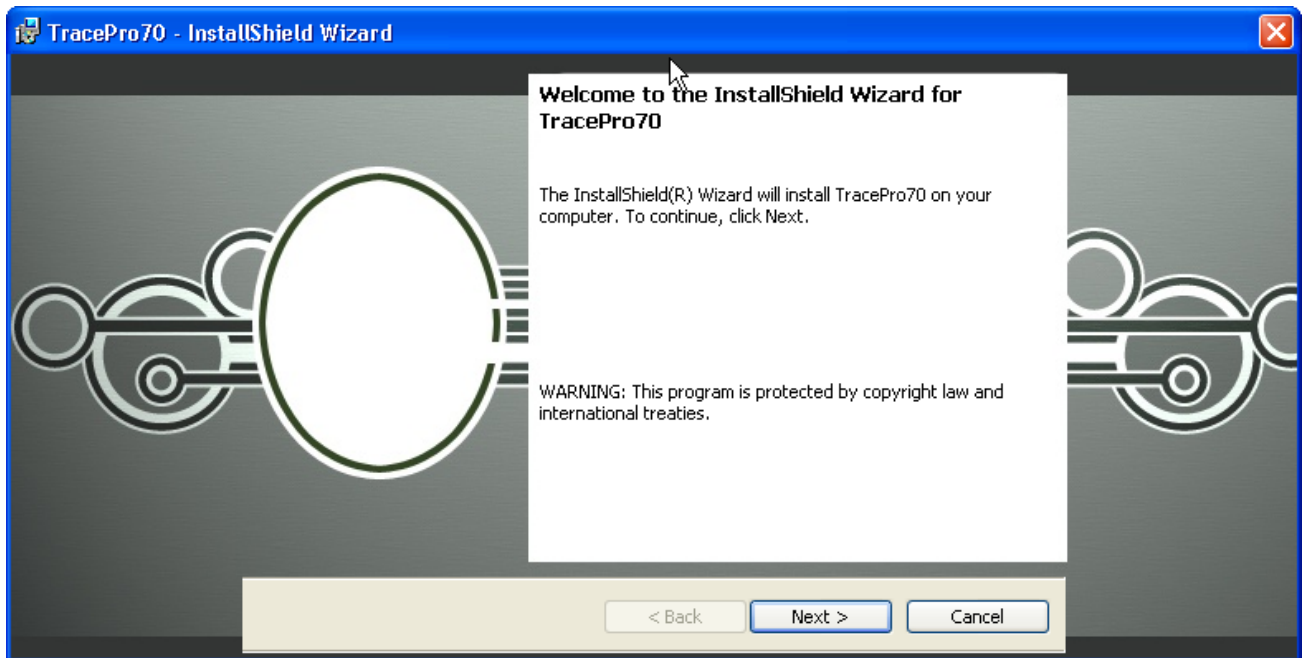
… select **Next** to continue the installation.
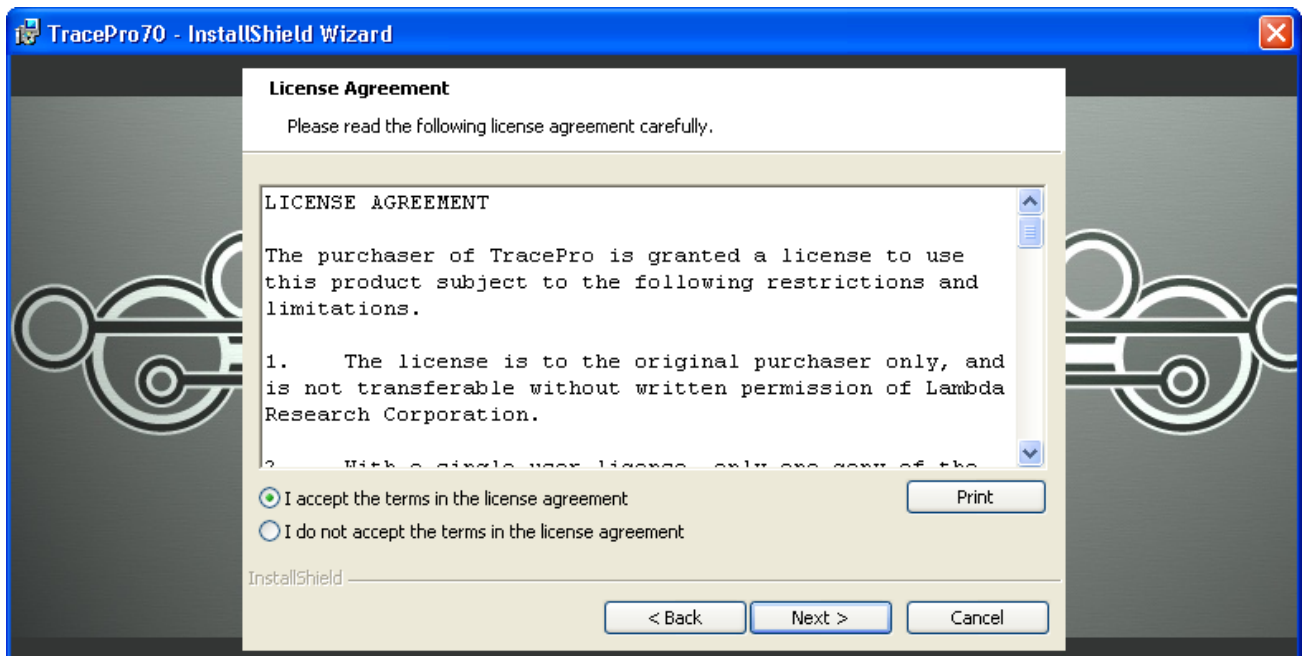
Select the button to accept the license agreement, then choose **Next** to continue.

Selecting Setup Type
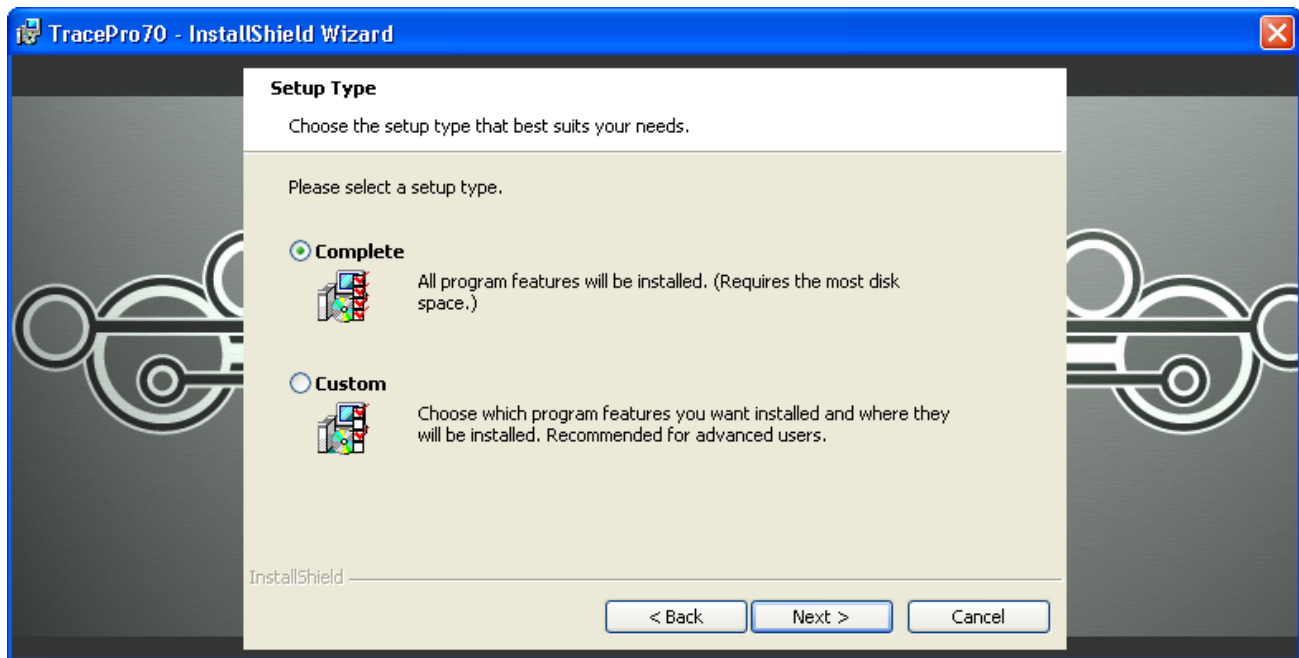
The Setup Type dialog allows you to select the TracePro components to be installed.

The installation components include:

- **Program Files**
- **Property Database**
- **Help Files** for TracePro and the Macro Reference
- **CATIA V5 Translators**
- **Utilities**

The *Complete* type will install all the installation components of TracePro to the default installation location: **C:\Program Files\Lambda Research Corporation\TracePro70.**

If you choose the *Custom* type, you will be presented with a choice of components to be installed and an option to select the installation directory for TracePro.

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Select TracePro Components (Custom Only)
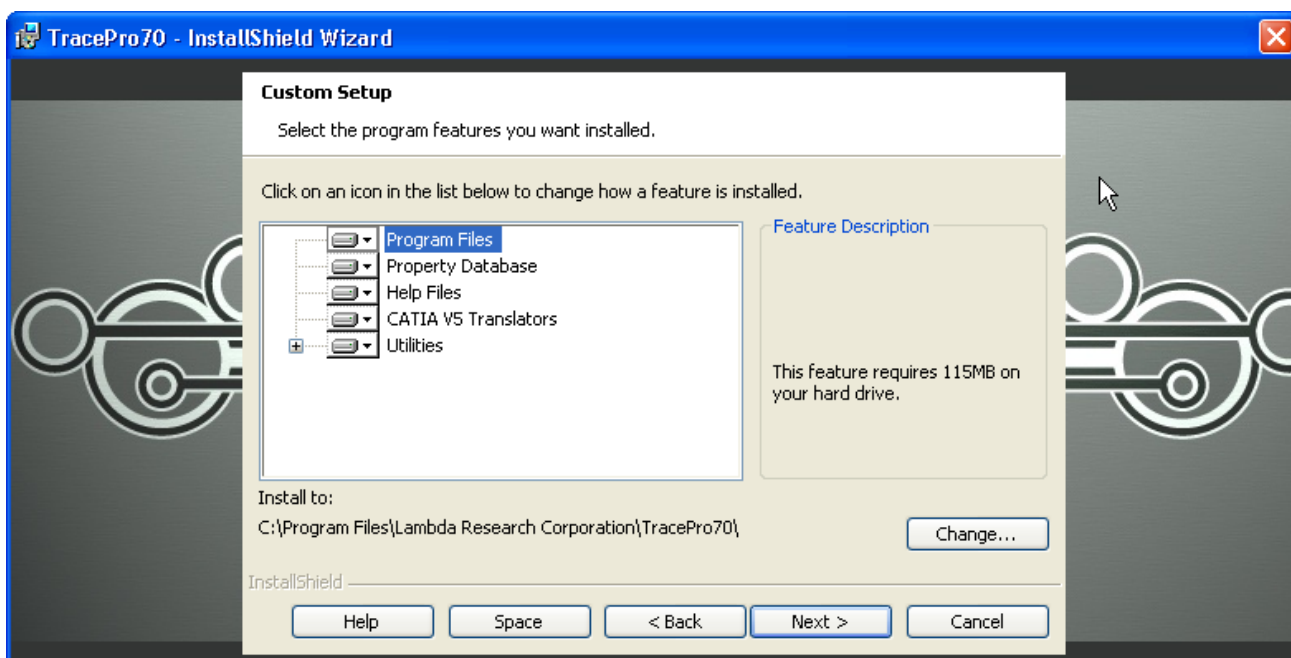
In the Custom Setup dialog, select or deselect the components to be installed, and optionally click **Change** if you would like to choose the destination location for the TracePro installation
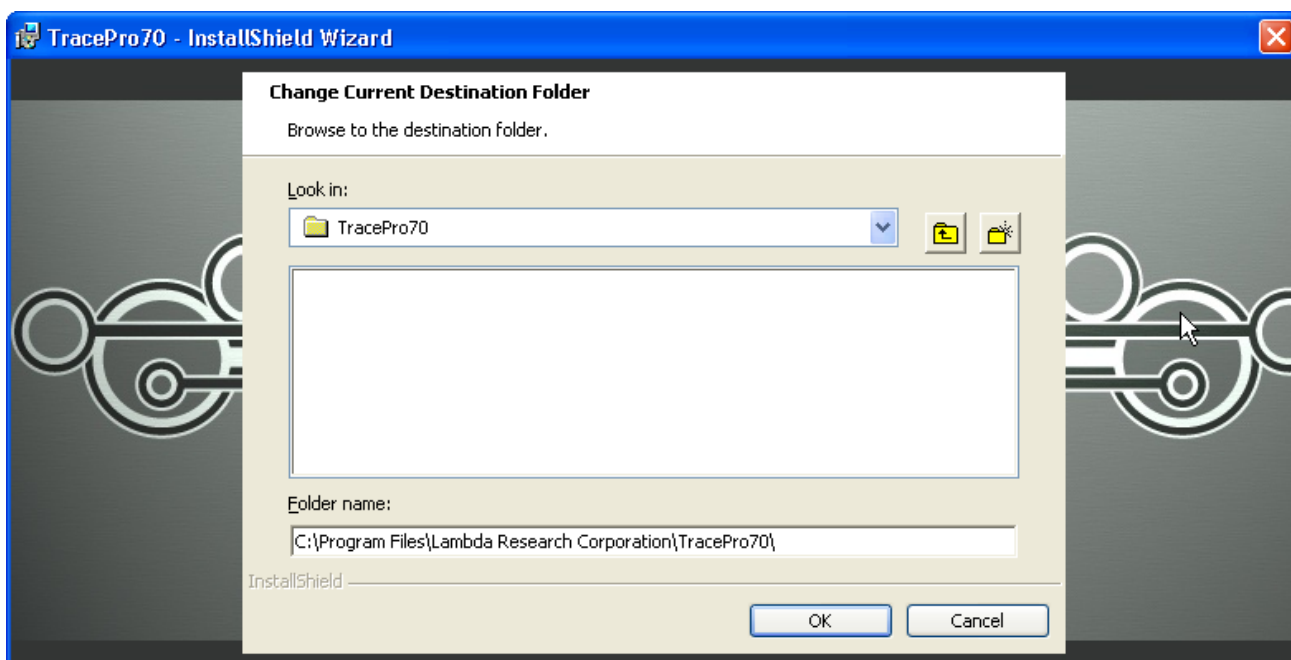
In the Change Current Destination Folder dialog, locate the folder for the TracePro installation, click OK to return to the Custom Setup dialog, then click **Next** to continue the installation.

Installing the Program
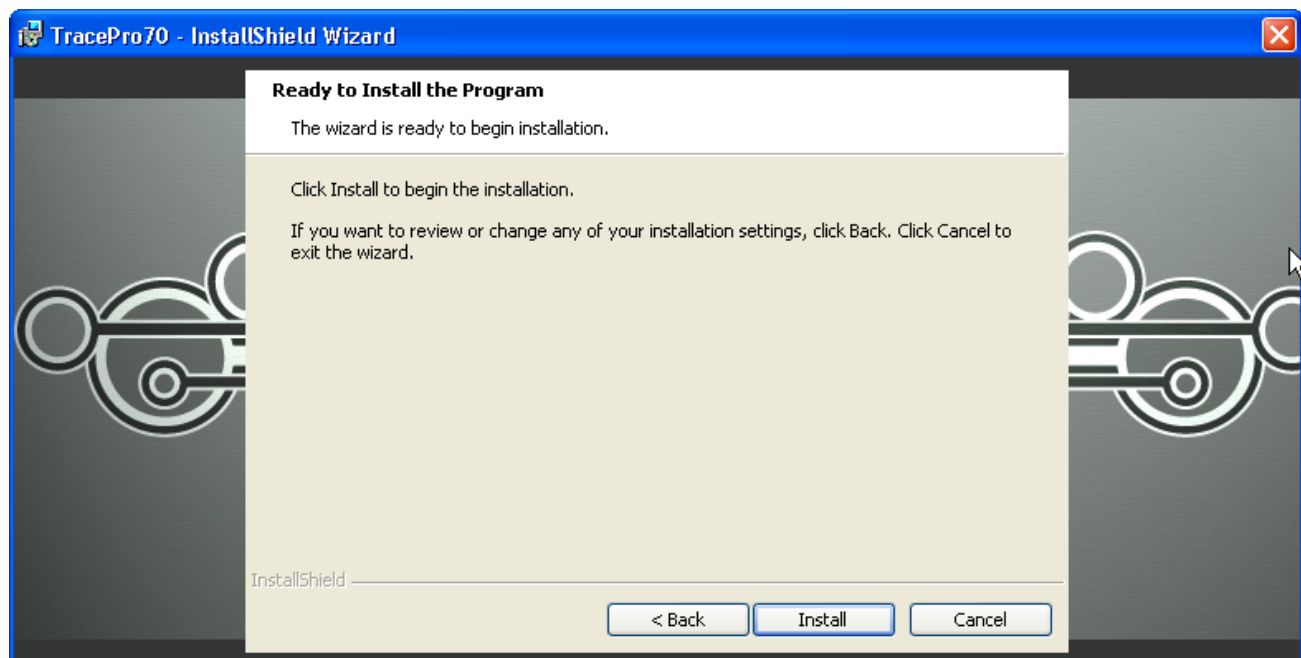
Click **Install** to continue.
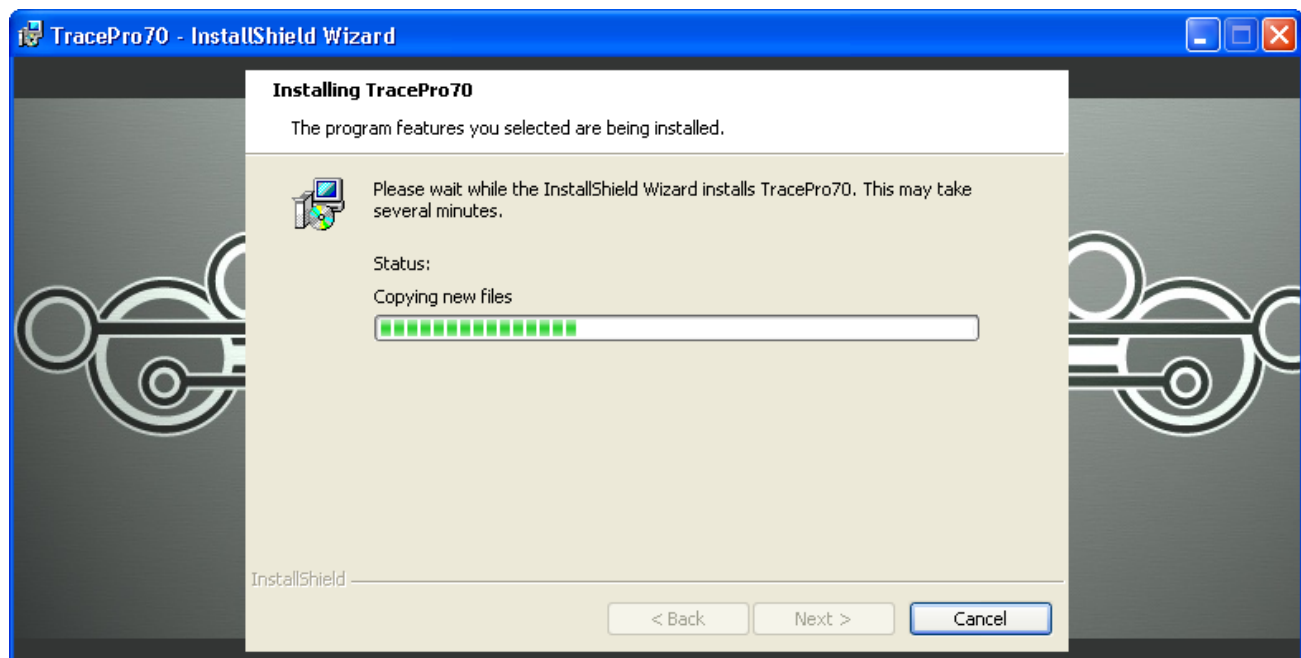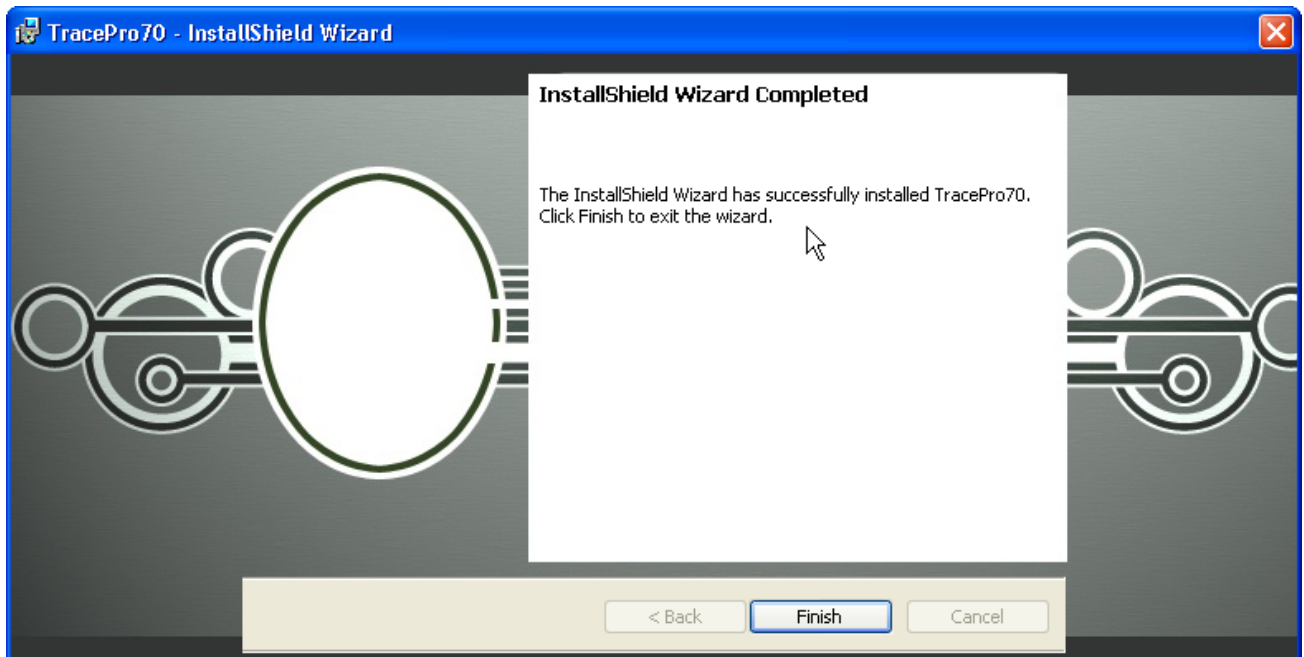
Click **Finish** to complete the installation.

TracePro Network License Server Installation

If the TracePro software is not installed on the network license server, there are two items of software that need to be installed from the links on the TracePro Releases webpage:

http://www.lambdares.com/technical_support/tracepro/releases/

- Sentinel System Drivers (enables communication between the PC and the hardware key)
- Field Exchange Utility (required for updating license information stored on the hardware key)

AFTER INSTALLATION

Launching TracePro

To launch TracePro, select one of the six **TracePro70** icons from the Windows Start→Programs menu.
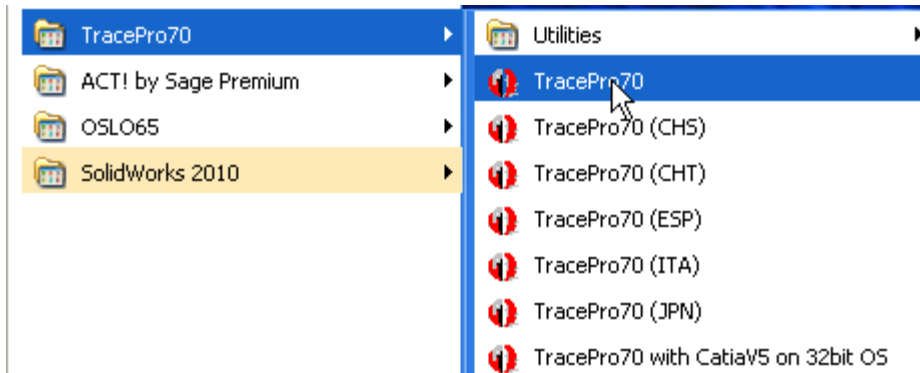
Please note that TracePro can be launched with any of the following International Language options:
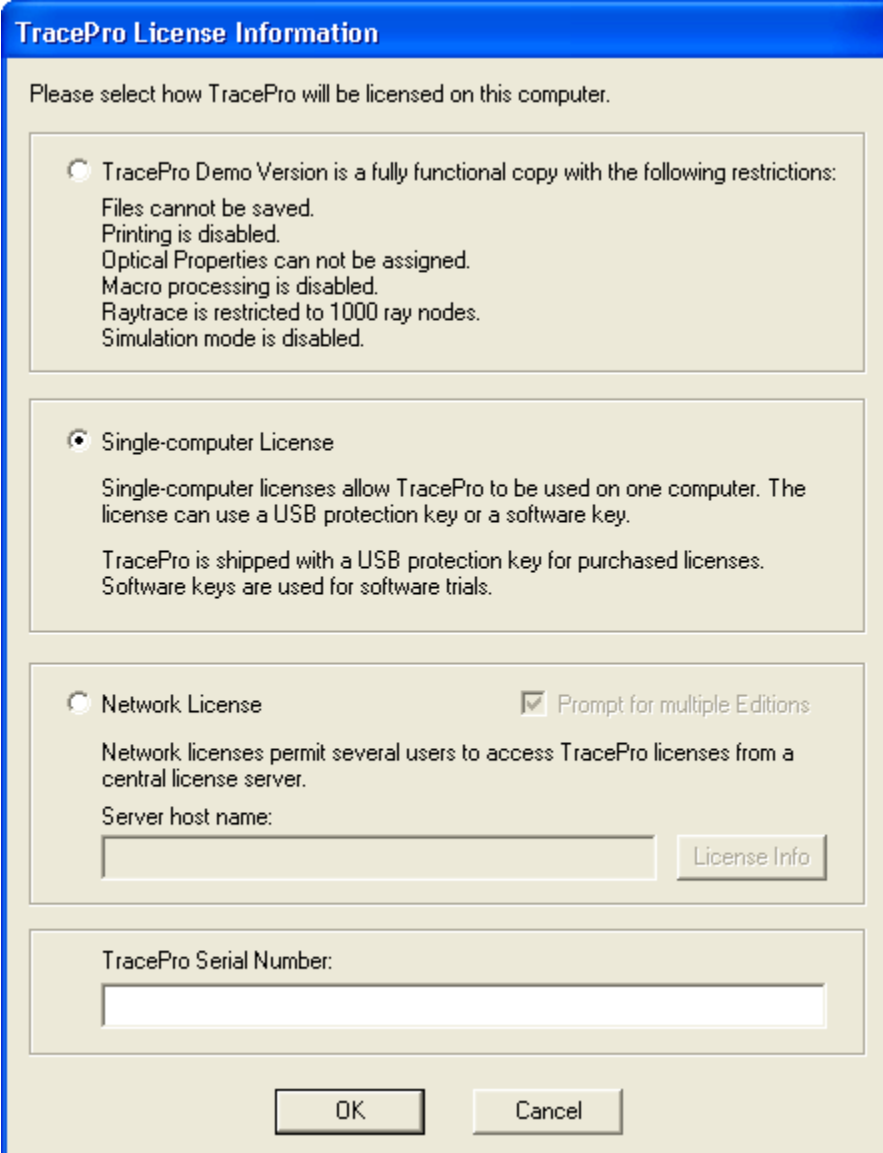
- (CHS) Chinese Simplified
- (CHT) Chinese Traditional
- (ESP) Spanish
- (ITA) Italian
- (JPN) Japanese

TracePro can also be launched to run the CatiaV5 Translator. This CAD Translator is an add-on feature of TracePro, and the TracePro license must include this option:

- TracePro70 with CatiaV5 on 32 bit OS

Entering TracePro License Information

The first time TracePro is launched, or any time **Help|License** is selected from the TracePro menu, the TracePro License Information dialog will appear:

TracePro has three license modes:

- TracePro Demo Version
- Single-computer License
- Network License

The descriptions on the next page will help you decide the correct option to select.

TracePro Demo Version

The TracePro Demo Version mode is an unlicensed, limited version of TracePro.

Single-computer License

The Single-computer License mode is controlled by one of the following:

- Hardware Key

    - generally used for permanent licenses only

    - must be connected to the PC (USB or parallel port)

    - portable - can be transferred to another PC

- Software Key

    - generally used for trial/temporary licenses

    - will only work on the specific PC for which it was generated

Network License

The Network License mode allows several users on a single Local Area Network (LAN) to share licenses of TracePro. TracePro must be installed on each user's computer.

- TracePro uses a SafeNet Hardware Key from SafeNet Incorporated, and this Hardware Key must be connected to one PC on the network that has been designated as the TracePro License Server. Ports 6001and 6002 are used for the communication between the server and the PC's running TracePro, so these ports must be opened in the server's firewall.

- The PC acting as the license server must also have the Sentinel System Drivers installed. These drivers allow the hardware key to be read by the TracePro software, and are automatically installed when installing TracePro. The latest drivers, as well as utility programs for troubleshooting and resolving technical problems are available from the Hardware Key manufacturer's website:

    http://www.safenet-inc.com/support_and_downloads/download_drivers/sentinel_drivers.aspx

- Each TracePro user needs to enter the Server Name to point TracePro to the network location where the license(s) is (are) being managed.

The **Prompt for multiple Editions** checkbox provides an option that will display the following dialog box each time TracePro is launched.
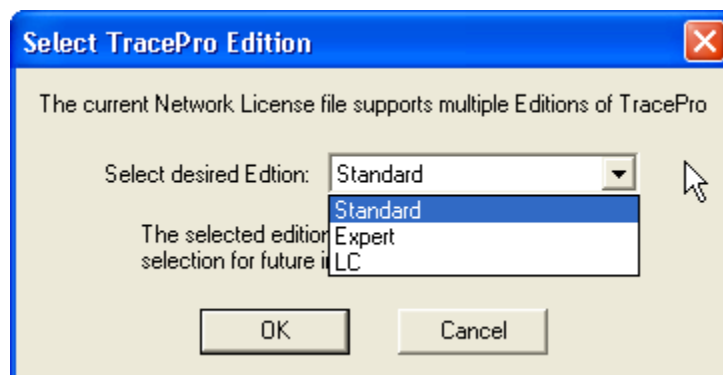
When the License File includes licenses for two or more Editions of TracePro and this box is checked in the TracePro License Information dialog, the User can choose the Edition of TracePro to be run each time TracePro is launched.

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The **License Info** checkbox provides an option that will display the TracePro Key Number that is connected to that server, and the number of licenses for each TracePro Edition that are available
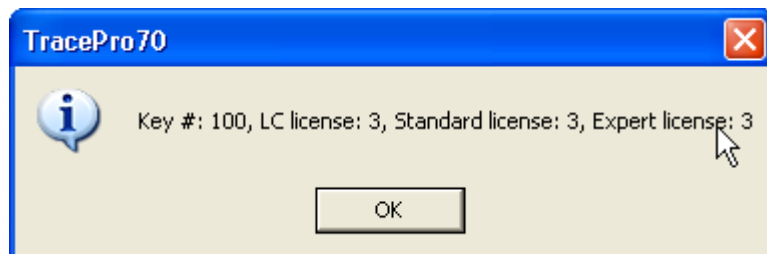
TracePro Serial Number

The TracePro Serial Number may be stored in the TracePro License Information dialog. This Serial Number is needed to register to access the restricted Technical Support areas of the Lambda Research website. It is recommended that the Serial Number be entered in this field at the time of license entry simply because the documentation of the TracePro Serial Number is available during installation and startup, so this serial number will be preserved in the License Information dialog for future reference when access to the website is desired.

To register on the website, please go to

http://www.lambdares.com/technical_support/login/registration/

then fill in the required information including the serial number. For future visits to the restricted-access areas of our website, you will only need the Username and Password that you establish during this registration.

This Website Serial Number can be used by more than one individual, and we encourage TracePro licensees to distribute it to other users of the license so they can register for website access.

Click OK to Update TracePro License Information

- TracePro Demo Version - Click OK to launch the program
- Single-computer License - Connect the Hardware Key then click OK to launch the program
- Network License – Enter the ServerName, click OK, then choose the TracePro Edition
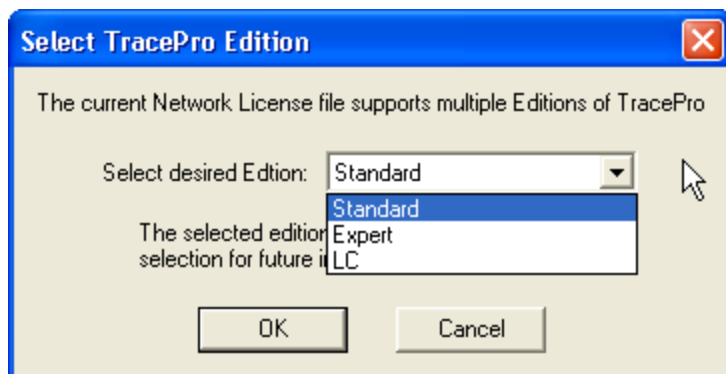
Requesting/Updating Licenses

Send Locking Code to Lambda Research

To provide Lambda Research with the required information to send back a New or Updated License, please launch the **Field Exchange Utility** from the Programs list in Windows
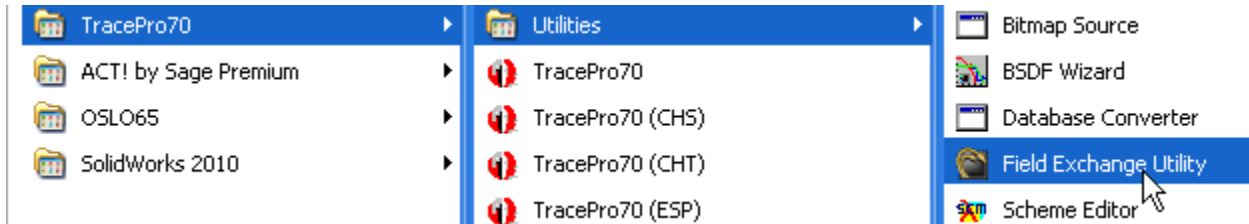
To update a Hardware Key, verify that the key is connected to the PC, disconnect any other Sentinel Keys connected to the PC, then choose the **Hardware Key** tab. For a Software Key, choose the **Software Key** tab and select if this is for a **New** or **Existing License**.

Click on **Get Locking Code**.

When the Locking Code displays in the window, use the **Save locking code to a file** button (.loc) and send the Locking Code to license@lambdares.com (the copy option is not recommended because an incomplete code can be copied in error).

Please include your name, company name, and TracePro Key Number in the e-mail to assist us in identifying you.
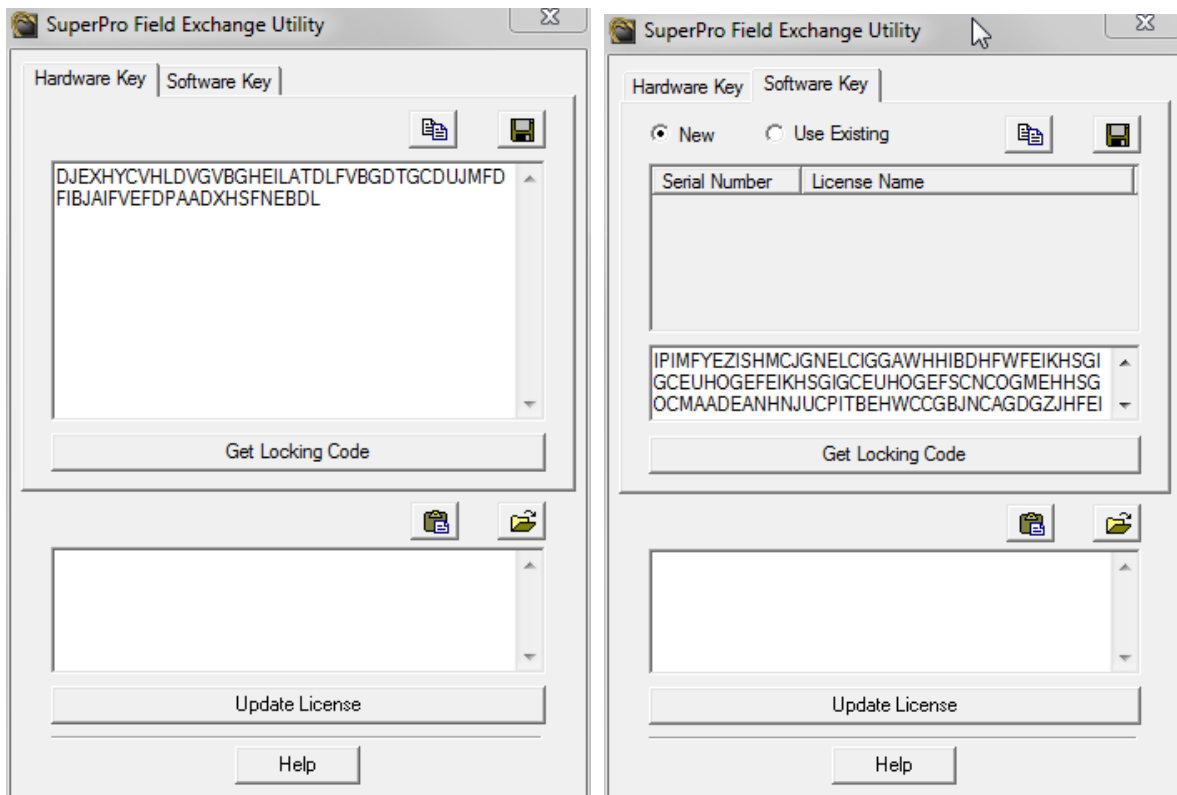
Receive License Code and Update License

To update a Hardware Key, verify that the key is connected to the PC, disconnect any other Sentinel keys from the PC, launch the **Field Exchange Utility** from the Programs list in Windows, then choose the **Hardware Key** tab.

For a Software Key, Launch the **Field Exchange Utility** from the Programs list in Windows, choose the **Software Key** tab and select if this is for a **New** or **Existing License**.

When the License Code is received from Lambda Research, use either the **Paste to Clipboard** button or the **Load license code to a file** button to load the license code.
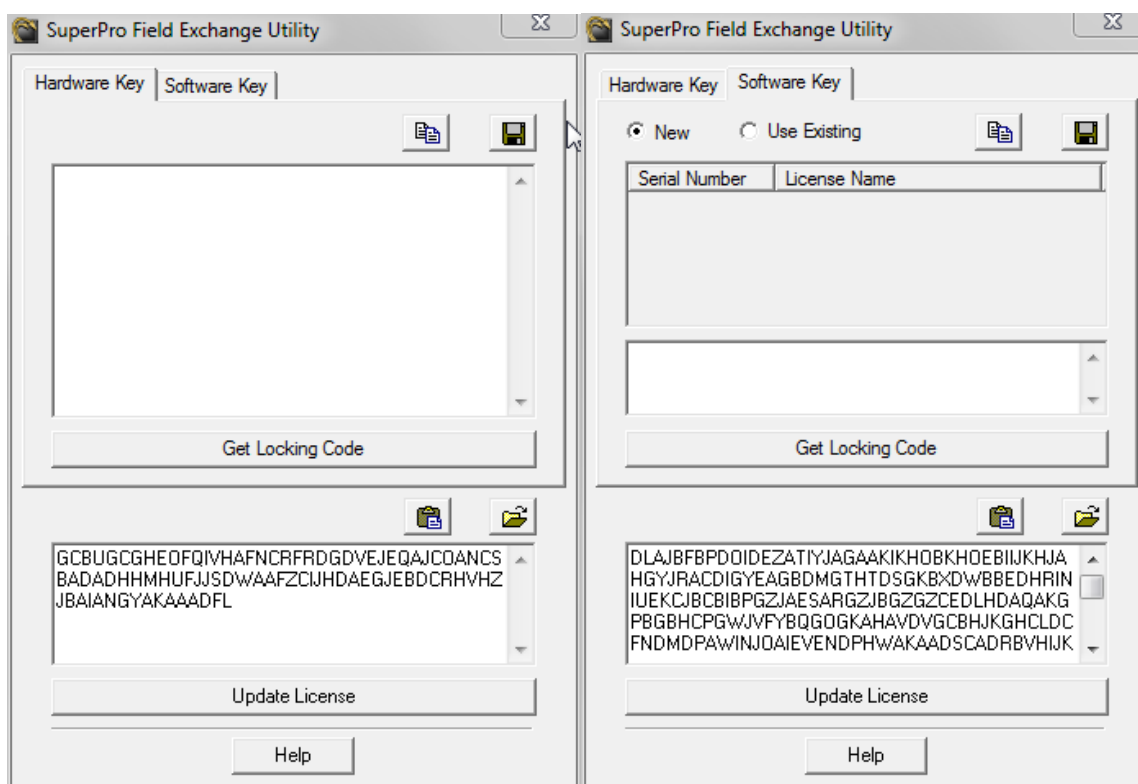
Click **Update License**.

Please note that this action has reprogrammed the Hardware Key, so if the key is transferred to another PC there is no further action required to run the software.

TracePro Properties Database

The TracePro Properties Database file, TracePro.db, is the file where all property data is stored. By retaining this data in a separate database, the data is available for any TracePro model, and a change in the data will be incorporated into all models using that property.

New Properties Database for a First-Time Installation of TracePro

Upon initial launch of TracePro, the following message will appear:

TracePro

A new, factory-fresh TracePro.db file has been installed in your profile folder.

The exact location can be found by using the View|Options... menu selection (General tab).

OK
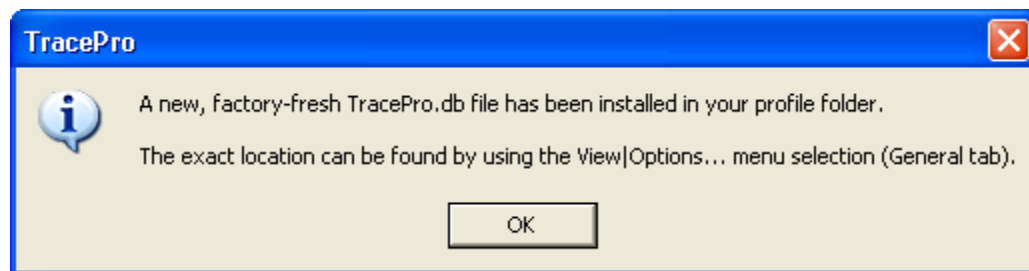
Click **OK** to acknowledge that a new Properties Database file has been copied to your user profile. TracePro is now ready to run.

Updating Properties Database from an Installation of TracePro 5.0 or earlier

To access properties from an installation of TracePro 5.0 or earlier in the current release of TracePro, the old properties database (.mdb) must be converted to the current format (.db).

- To determine the name and location of the Properties Database used in an older release of TracePro (TracePro 5.0.x and earlier), launch that release of TracePro, then select View/Customize and make note of the name and location of the Properties Database.

- To determine the name and location of the Properties Database used in TracePro 7.0, launch TracePro 7.0, then select View/Options - General and make note of the name and location of the Properties Database.

- Move the old database to the location of the current database.

- In TracePro 7.0, select View/Options, click the Browse button next to the Properties Database field, and point to the old database (.mdb).

- Click OK when prompted to convert the database from .mdb to .db format (Note that the original .mdb file will be left intact, and will be available for use with TracePro 5.0 or earlier)

- In TracePro 7.0 View/Options, select the newly converted .db file as the Properties Database.

Modify, Repair, or Remove the Program

In order to Modify, Repair, or Remove TracePro, initiate the TracePro installation from the CD or web download (TracePro 60x_Installer.exe). If TracePro detects that the same release of TracePro has already been installed, the following screen will appear:
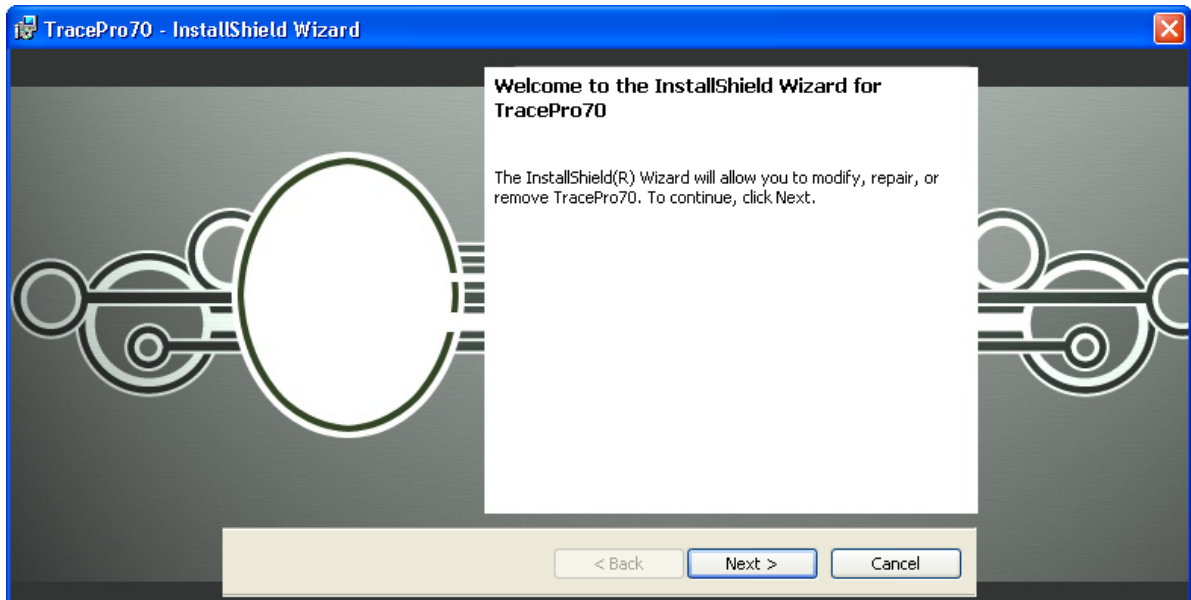
Click **Next** to continue.
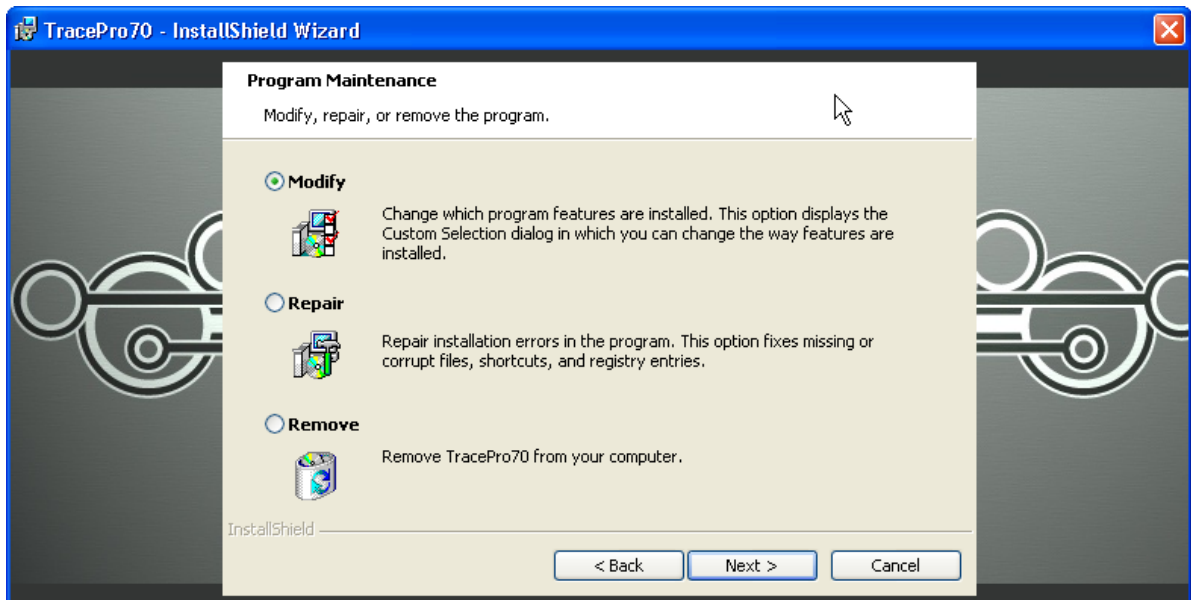
Choose the **Modify** to open the Select Feature dialog box to choose which installation components to install or uninstall at this time.

Choose the **Repair** option to automatically run a Maintenance routine to reinstall any corrupted files from a prior installation.

Choose the **Remove** option to uninstall the program.

TracePro Updates

TracePro updates are available from the Lambda Research Corporation website.   Please go to

http://www.lambdares.com/technical_support/tracepro/releases/

select the link for the Current TracePro Release, then follow the steps in the section of this Installation Guide titled "Downloading and Installing TracePro from the Lambda Research Website"

TracePro 7.0.x releases will overwrite previous 7.0.x releases, but will not overwrite TracePro 6.0.x or earlier.

All TracePro 7.0.x releases run from the same license. See the section titled "Requesting/Updating a License" to obtain a 7.0 license.

To determine the release of the currently installed TracePro, select **Help/About TracePro.**

Monitoring Network License Usage

The SafeNet Sentinel licensing used by TracePro has a Monitoring Tool that you
can be used to detemine the status of the network license. To access the Monitoring Tool, enter the following in your web browser:

http://<ServerName>:6002/

Sentinel License Monitor

System Address: <http://srv-alpha:6002/>

Sentinel Protection Server Version 7.6.0

This web page shows you details of the keys attached/installed on the system.

Please click on a key number to view the details about the clients who are using the licenses available with this key.

Keys#	Key Type	Form Factor	Serial Number	Model Number	Hard Limit	Licenses-In-Use	Highest Used	Time-Outs	Sublicense
1	SuperPro	USB	0x00000A80	*	10	2	6	188	>>

The use of the Monitoring Tool is documented on the SafeNet website on Page 7 of the End User Guide:

http://www2.safenet-inc.com/support/files/SafeNet_Sentinel_EndUser_Guide.pdf

Additional Resources – Utilities, Help, and Technical Support

Utilities

Select TracePro60 in Windows Program Files | TracePro to launch any of the five TracePro Utilities:

- Bitmap Source – converts images to TracePro Source Files

- BSDF Wizard – converts scatter data to ABg coefficients used in a TracePro Surface Property

- Database Converter – converts TracePro Properties Database from .mdb (TracePro 5.0 and earlier) to .db (TracePro 6.0 and later)

- Field Exchange Utility – used for Requesting/Updating the TracePro License

- Scheme Editor – text editor with special features for editing TracePro macros
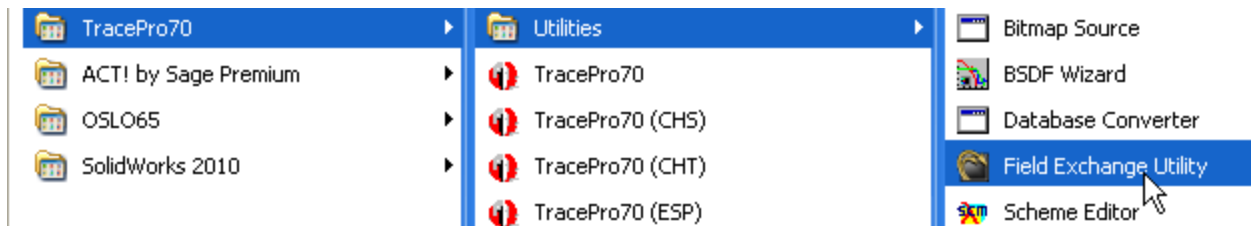
Help Menu

The TracePro Help Menu includes the following items:

- Help Topics – searchable help file with detailed descriptions of all TracePro features

- Macro Reference – library of all Scheme Macro commands available in TracePro

- TracePro Online - a link to the TracePro Technical Support website

- TracePro User Manual – opens a pdf file of the manual

- License – opens the TracePro License Information dialog

- About TracePro – displays the current release of TracePro
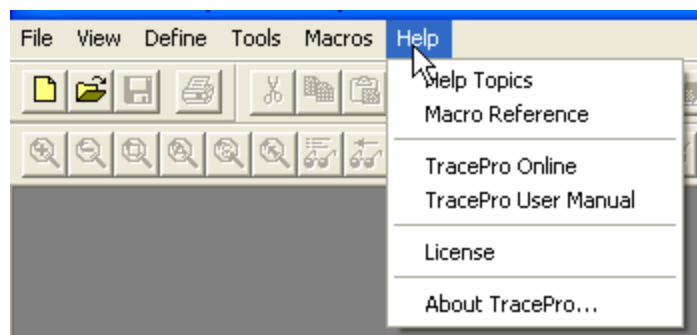
Technical Support Website

The TracePro Technical Support website is accessible from the Help Menu, or by going to http://www.lambdares.com/technical_support/tracepro/ in any Web Browser, and includes the following resources:

- Releases - software downloads and documentation for current and past releases

- Utilities - software programs that assist in quickly and accurately creating and optimizing properties

- Early Access - software downloads and documentation for the very latest "in process" software prior to formal release

- Examples - downloadable files that demonstrate the capabilities of the software

- Libraries - downloadable files/models of generally available catalog products for use in the software

- Properties - downloadable files of detailed optical property data, ready for import into the software

- Tools - perform or facilitate certain operations, which can then be entered or imported into the software

- Tutorials - pictorially demonstrate how to perform specific operations with the software
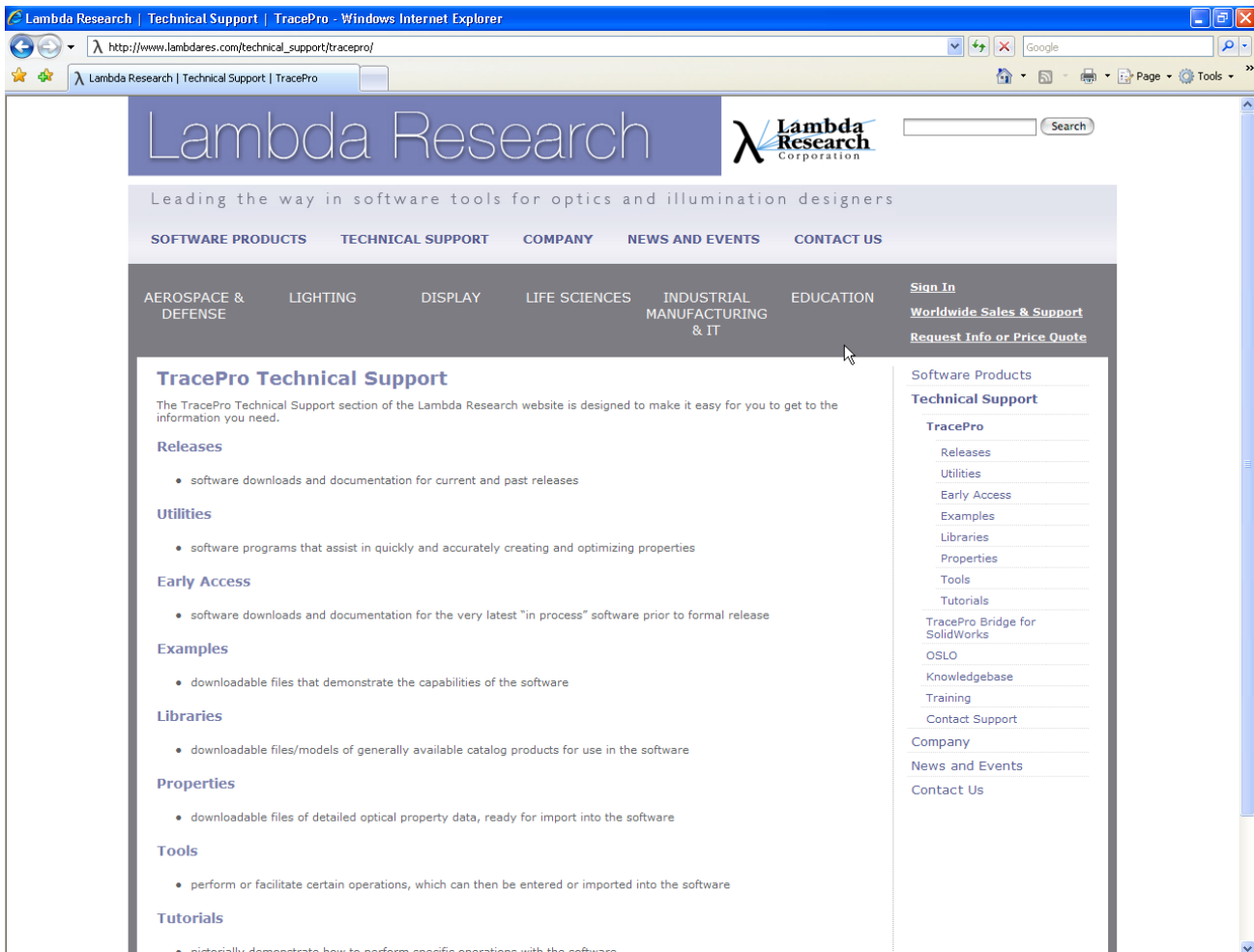
QUICKSTART GUIDE - TRACEPRO 30-DAY-TRIAL

This section provides the step-by-step instructions for 30-Day-Trial Users of TracePro to get the program running.

Website Registration

The TracePro software, documentation, examples, libraries, and tutorials are maintained in a secure area of the Lambda Research website. Users must receive a Website Serial Number from Lambda Research and use this serial number to register on the website.

- Receive e-mail from license@lambdares.com with Website Serial Number
- Go to http://www.lambdares.com/technical_support/login/registration/

- Enter the information, including the Website Serial Number
- Please make note of the Username and Password that you have chosen, as these will be needed for future access to the secure pages of the website
- Click Submit

TracePro Installation

Downloading from the Lambda Research Website

- Go to http://www.lambdares.com/technical_support/tracepro/releases/
- Login using the Username and Password you established during Website Registration

- Download the current release of TracePro
- Select 32-bit or 64-bit consistent with the Windows Operating System on the PC that will be running TracePro
- Note that the TracePro Users Manual and TracePro Installation Guide are available from this webpage

- Double-click on TracePro…Installer.exe to install TracePro and follow the steps in the TracePro Installation Guide to complete the installation

Send Locking Code to Lambda Research

- The installation of TracePro has also installed the Field Exchange Utility.
- Launch the **Field Exchange Utility** from the Programs list in Windows
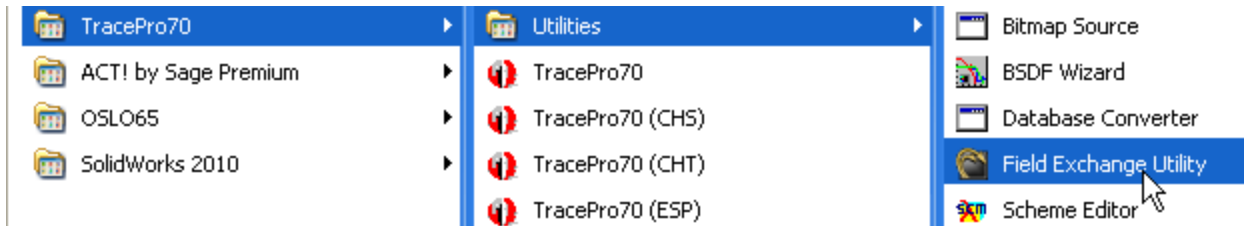
- Choose the **Software Key** tab and select the **New** button
- Click on **Get Locking Code**
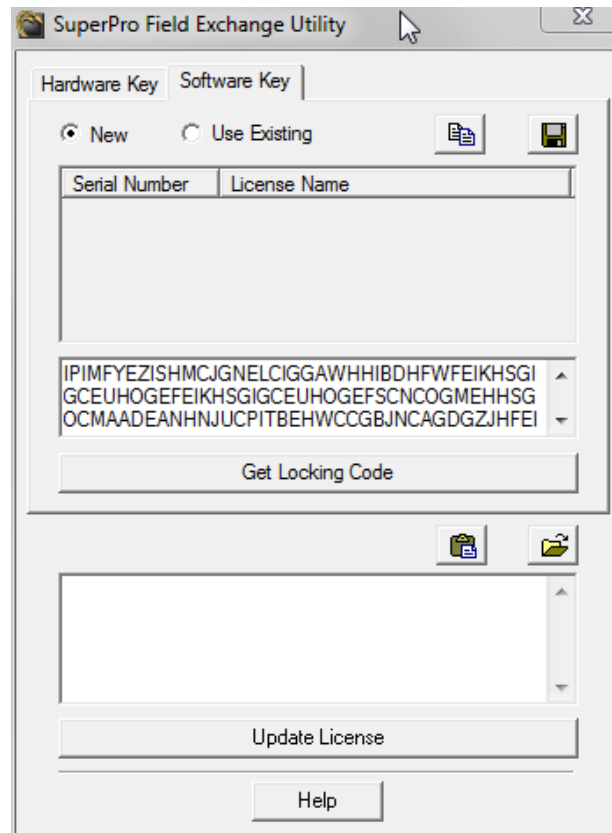
- Use the **Save locking code to a file** button (.loc) and send the Locking Code to license@lambdares.com (the copy option is not recommended because an incomplete code can be copied in error).
- Please include your name and company name in the e-mail to assist us in identifying you.

Receive License Code and Update License

- Receive e-mail from license@lambdares.com with the License Code (.lic file)
- Launch the **Field Exchange Utility** from the Programs list in Windows

- Choose the **Software Key** tab and select the **New** button
- Use the **Load license code to a file** button to load the license code
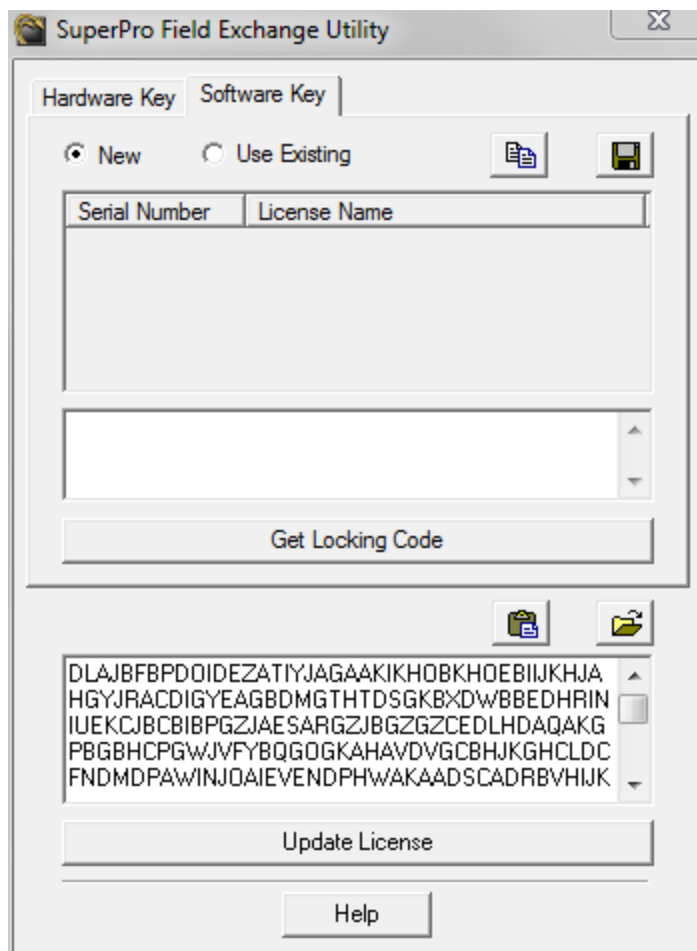
- Click **Update License**.

Launching TracePro

- Select one of the **TracePro** icons from Windows Start Menu / Programs.
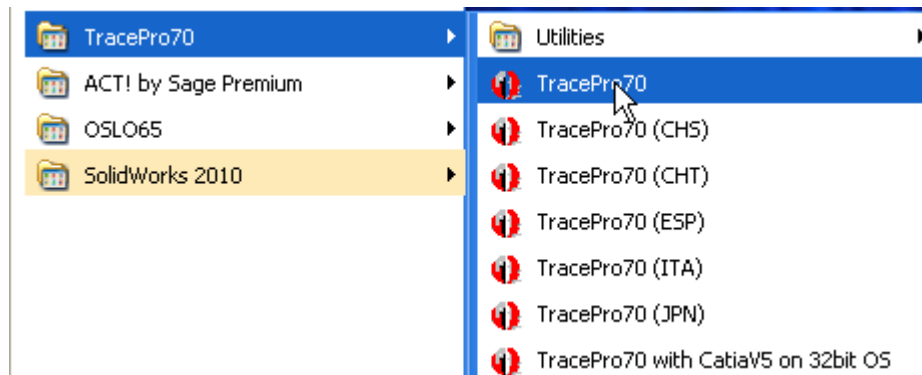
- The first time TracePro is launched, the TracePro License Information dialog will appear:
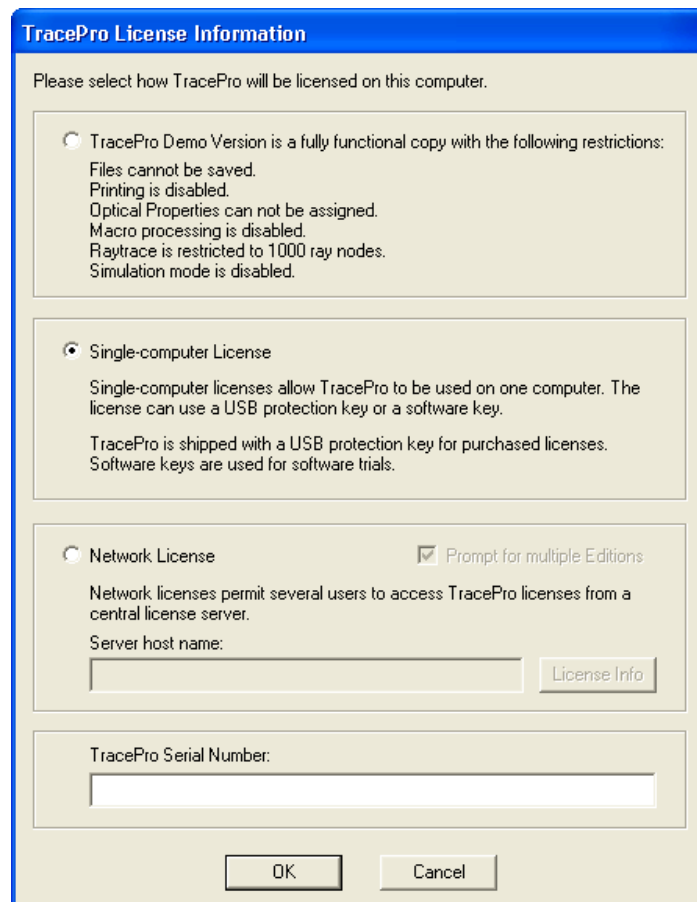
- Select the **Single-computer License** option
- (Optional) Enter the **TracePro Serial Number (aka Website Serial Number)**
- Click **OK** to begin the TracePro session

Temporary License

- The Software Key provides a temporary license. To determine the number of days remaining before the license expires, select **Help/About TracePro**:
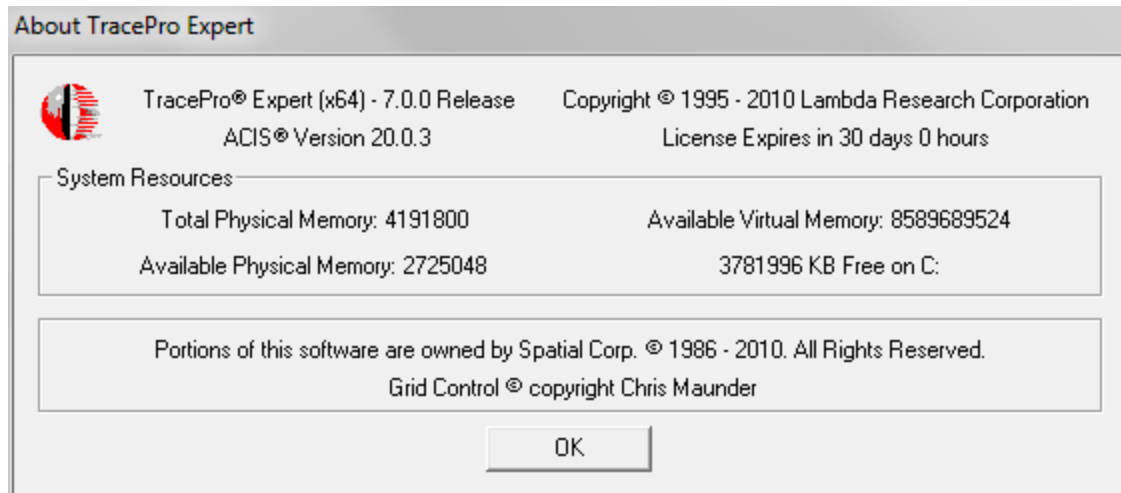
Updating a Software Key License

- If the need arises to update the software key license, please follow the steps in the **Send Locking Code to Lambda Research** and **Receive License Code and Update License** sections again, but this time select the **Use Existing** button in the Field Exchange Utility.

QUICKSTART GUIDE - TRACEPRO SINGLE COMPUTER LICENSE

This document provides the step-by-step instructions for new purchasers of TracePro with a Single Computer License to get the program running.

Website Registration

The TracePro software, documentation, examples, libraries, and tutorials are maintained in a secure area of the Lambda Research website. Users must receive a Website Serial Number from Lambda Research and use this serial number to register on the website.

- Receive Website Serial Number from Lambda Research
- Go to http://www.lambdares.com/technical_support/login/registration/

- Enter the information, including the Website Serial Number
- Please make note of the Username and Password that you have chosen, as these will be needed for future access to the secure pages of the website
- Click Submit

TracePro Installation

- Go to http://www.lambdares.com/technical_support/tracepro/releases/
- Login using the Username and Password you established during Website Registration

- Download the current release of TracePro - select 32-bit or 64-bit consistent with the Windows Operating System on the PC that will be running TracePro
- Note that the TracePro Users Manual and TracePro Installation Guide are available from this webpage

- Double-click on TracePro…Installer.exe to install TracePro and follow the steps in the TracePro Installation Guide to complete the installation

Launching TracePro

- Verify that the TracePro Hardware Key is connected to the PC
- Launch TracePro
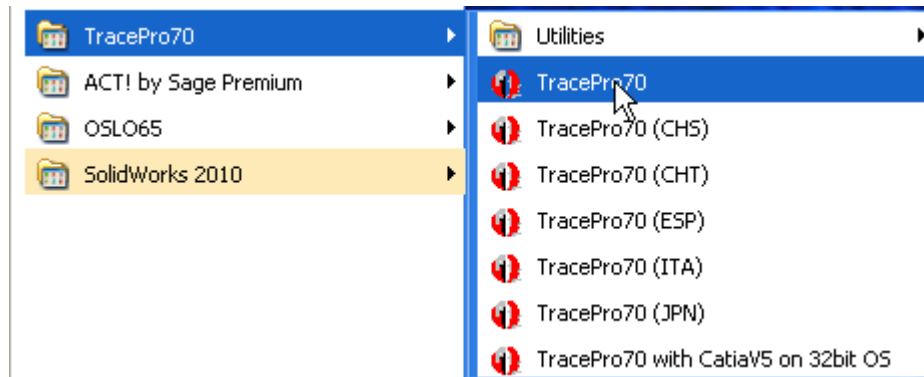
- the program may just launch or the TracePro License Information dialog may appear:

- Select the **Single-computer License** option
- (Optional) Enter the **TracePro Serial Number**
- Click **OK** to begin the TracePro session

Temporary License

- The Hardware Key has been programmed with a temporary license. To determine the number of days remaining before the license expires, select **Help/About TracePro**:

- Lambda Research will provide a permanent TracePro license after receiving payment for TracePro.

To update the hardware key with the permanent TracePro license, please follow the steps in the next two sections to **Send Locking Code to Lambda Research** and **Receive License Code and Update License**.

Send Locking Code to Lambda Research

- The installation of TracePro has also installed the Field Exchange Utility.
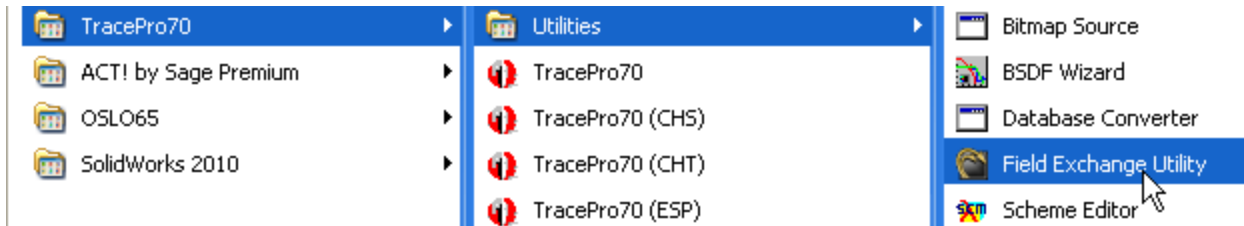- Launch the **Field Exchange Utility** from the Programs list in Windows

- Verify that the TracePro Hardware Key is connected to the PC
- Disconnect any other Sentinel Keys connected to the PC
- Choose the **Hardware Key** tab
- Click on **Get Locking Code**

- Use the **Save locking code to a file** button (.loc) and send the Locking Code to license@lambdares.com (the copy option is not recommended because an incomplete code can be copied).
- Please include your name, company name, and TracePro Key Number in the e-mail to assist us in identifying you.

Receive License Code and Update License

- The installation of TracePro has also installed the Field Exchange Utility.
- Launch the **Field Exchange Utility** from the Programs list in Windows

- Verify that the TracePro Hardware Key is connected to the PC
- Disconnect any other Sentinel Keys connected to the PC
- Choose the **Hardware Key** tab
- Use the **Load license code to a file** button to load the license code

- Click **Update License**.
- Please note that this action has reprogrammed the Hardware Key, so if the key is transferred to another PC there is no further action required to run the software.

QUICKSTART GUIDE - TRACEPRO NETWORK LICENSE

This document provides the step-by-step instructions for new purchasers of TracePro with a Network License to get the program running.

Website Registration (each TracePro User)

The TracePro software, documentation, examples, libraries, and tutorials are maintained in a secure area of the Lambda Research website. Users must receive a Website Serial Number from Lambda Research and use this serial number to register on the website.

- Receive Website Serial Number from Lambda Research
- Go to http://www.lambdares.com/technical_support/login/registration/

- Enter the information, including the Website Serial Number
- Please make note of the Username and Password that you have chosen, as these will be needed for future access to the secure pages of the website
- Click Submit

TracePro Installation (each PC running TracePro)

- Go to http://www.lambdares.com/technical_support/tracepro/releases/
- Login using the Username and Password you established during Website Registration

- Download the current release of TracePro - select 32-bit or 64-bit consistent with the Windows Operating System on the PC that will be running TracePro
- Note that the TracePro Users Manual and TracePro Installation Guide are available from this webpage

- Double-click on TracePro…Installer.exe to install TracePro and follow the steps in the TracePro Installation Guide to complete the installation

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Connect the Hardware Key (TracePro License Server)

- Select a PC on the Network that will act as the TracePro License Server and connect the TracePro Hardware Key
- If the TracePro software is not installed on the license server, there are two items of software that need to be installed from the links on the TracePro Releases webpage:
  http://www.lambdares.com/technical_support/tracepro/releases/
  - o Sentinel System Drivers (enables communication between the PC and the hardware key)
  - o Field Exchange Utility (required for updating license information stored on the hardware key)

Launching TracePro (each PC running TracePro)

- Select one of the **TracePro** icons from Windows Start Menu / Programs.
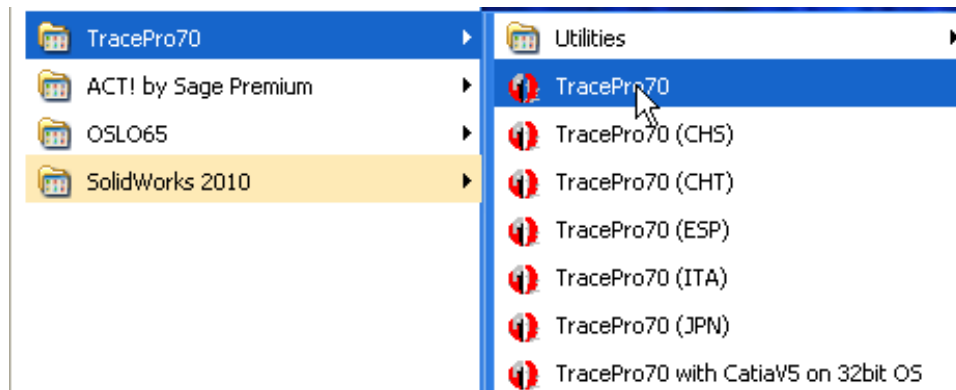
- The License Information dialog will appear when TracePro is first launched
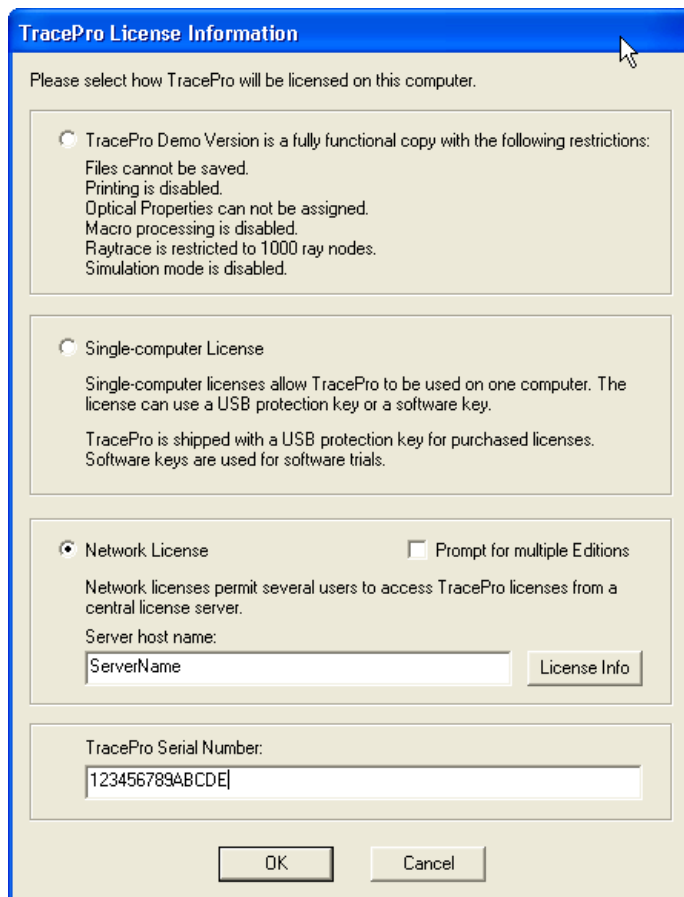
- Select the **Network License** option
- Enter the Server host name
- (Optional) Enter the TracePro Serial Number
- (Optional) Click on the License Info button to display the TracePro Key Number that is connected to that server, and the number of licenses for each TracePro Edition that are available
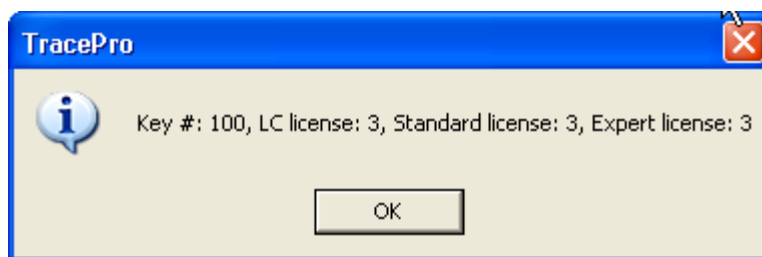
- Click OK to close the License Info window

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- (Optional) If the TracePro License includes two or more Editions of TracePro, checking the Prompt for multiple Editions checkbox will allow the User to choose the Edition of TracePro to be run each time TracePro is launched.
- Click OK in the TracePro License Information dialog
- Select the TracePro Edition

- Click OK to begin the TracePro session

Temporary License

- The Hardware Key has been programmed with a temporary license. To determine the number of days remaining before the license expires, select **Help/About TracePro**:

- Lambda Research will provide a permanent TracePro license after receiving payment for TracePro.
- To update the hardware key with the permanent TracePro license, please follow the steps in the next two sections to **Send Locking Code to Lambda Research** and **Receive License Code and Update License**

Send Locking Code to Lambda Research

- The installation of TracePro has also installed the Field Exchange Utility.
- If the TracePro software is not installed on the license server, there are two items of software that need to be installed from the links on the TracePro Releases webpage:
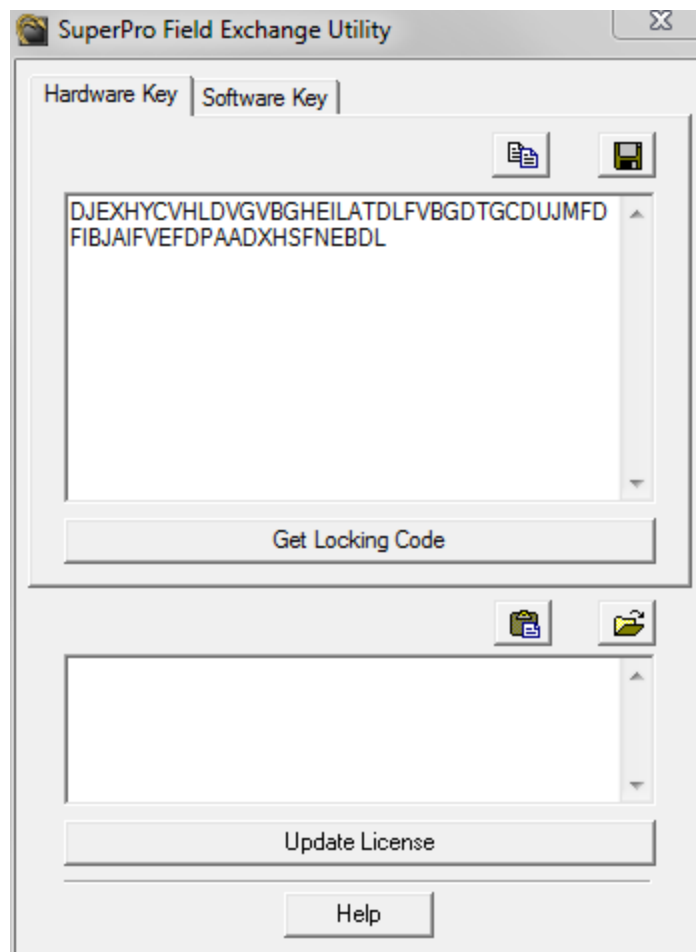 http://www.lambdares.com/technical_support/tracepro/releases/
  - o Sentinel System Drivers (enables communication between the PC and the hardware key)
  - o Field Exchange Utility (required for updating license information stored on the hardware key)
- Launch the **Field Exchange Utility** from the Programs list in Windows
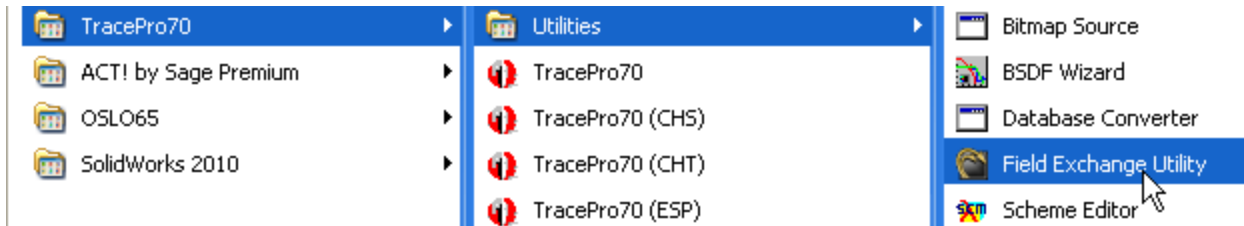

- Verify that the TracePro Hardware Key is connected to the PC
- Disconnect any other Sentinel Keys connected to the PC
- Choose the **Hardware Key** tab
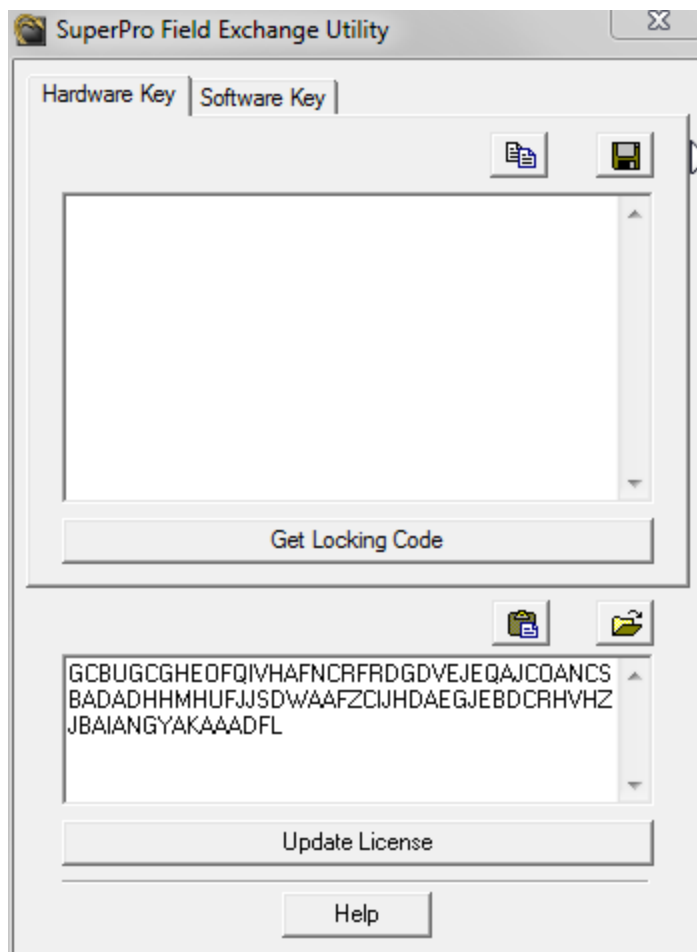- Click on **Get Locking Code**

- Use the **Save locking code to a file** button (.loc) and send the Locking Code to license@lambdares.com (the copy option is not recommended because an incomplete code can be copied).
- Please include your name, company name, and TracePro Key Number in the e-mail to assist us in identifying you.

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Receive License Code and Update License

- The installation of TracePro has also installed the Field Exchange Utility.
- If the TracePro software is not installed on the license server, there are two items of software that need to be installed from the links on the TracePro Releases webpage:
  http://www.lambdares.com/technical_support/tracepro/releases/
  - o Sentinel System Drivers (enables communication between the PC and the hardware key)
  - o Field Exchange Utility (required for updating license information stored on the hardware key)
- Launch the **Field Exchange Utility** from the Programs list in Windows

- Verify that the TracePro Hardware Key is connected to the PC
- Disconnect any other Sentinel Keys connected to the PC
- Choose the **Hardware Key** tab
- Use the **Load license code to a file** button to load the license code

- Click **Update License**.
- Please note that this action has reprogrammed the Hardware Key, so if the key is transferred to another PC there is no further action required to run the software.

TROUBLESHOOTING GUIDE - LICENSING AND INSTALLATION

Single-computer License Troubleshooting
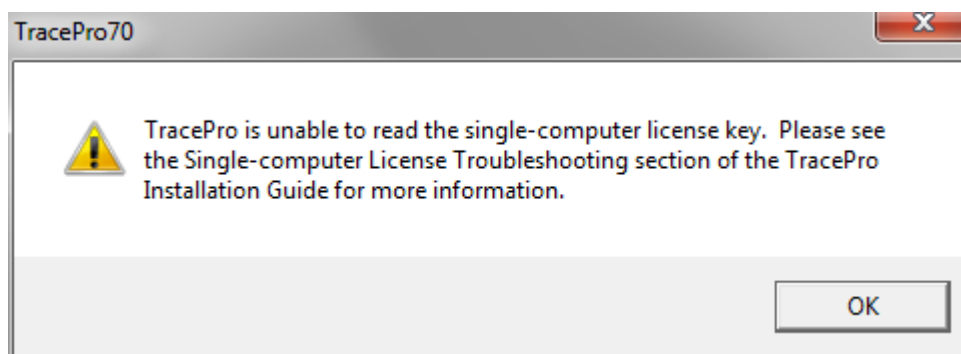
S1 - Sentinel System Drivers are failing/not installed

PROBLEM – Sentinel System Drivers from SafeNet enable the communication between TracePro and the License Key. These drivers are included in the TracePro installation, but for some reason they may not have installed properly, or they may be installed but not be functioning properly.

TEST – When the Sentinel Drivers are installed, there are actually two separate services installed. The "Sentinel Keys Server controls Single-computer (a.k.a standalone) keys, while the Sentinel Protection Server controls Network keys. Select Control Panel / Administrative Tools / Services / Sentinel, and the two services should be on the list. Verify that the "Status" for Sentinel Keys Server is "Started".

RESOLUTION #1 – If the Sentinel Keys Server appears on the list of services, right-click on Sentinel Keys Server and select "Stop", then right-click again and click "Start" to manually start the service.

RESOLUTION #2A – If the Sentinel Keys Server does not appear on the list of services, download and run the latest Sentinel Protection Installer from the SafeNet website:

http://www.safenet-inc.com/support_and_downloads/download_drivers/sentinel_drivers.aspx

RESOLUTION #2B – If the Sentinel Keys Server does not appear on the list of services even after downloading and installing the drivers, download and run the SSD Cleanup Utility from the same webpage, then try again to run the Sentinel Protection Installer. Please note that the cleanup utility also uninstalls TracePro and any other applications that have installed the Sentinel drivers, so TracePro will need to be reinstalled.

S2 - Key not updated for latest Software Release

PROBLEM - TracePro Releases like TracePro 7.0.0 are always of the format Major.Minor.Dot. When the key is updated to run a specific release, it will run all the dot releases of that series. If a Major or Minor release is installed, the key needs to be updated with the license information for that release.

TEST - There is file named TraceProLicenseKey.log that is generated each time you click "Cancel" in the License Information dialog to help us to troubleshoot problems like this. Please connect the problem key to the Server, launch TracePro 7.0, then hit Cancel to get out of the endless loop in the TracePro License Information dialog. This should generate the log file in one of the following locations:

Windows XP - C:\Documents and Settings\<USERNAME>\Application Data\Lambda Research Corporation\TracePro
Windows Vista and Windows 7 - C:\Users\<USERNAME>\AppData\Roaming\LambdaResearch Corporation\TracePro

Open TraceProLicenseKey.log in a text editor, and view line 9. If it reads "9: 70", that means the key is currently programmed for TracePro 7.0.

RESOLUTION - To obtain an updated license, you must provide us with a Locking Code. Please follow the steps in the section of this Installation Guide titled "Requesting/Updating Licenses".

S3 - Selecting Single-computer license when a Network Key is connected

PROBLEM - This error message will appear if a Network License Key is connected to the PC, but the Single-computer license option has been selected in the TracePro License Information dialog.

TEST/RESOLUTION - Click OK to this error to return to the TracePro License Information dialog, then select the Network License option

S4 - Remote Desktop

PROBLEM – A Single-computer License Key will not run TracePro via a Remote Desktop connection. SafeNet, the manufacturers of the Sentinel Keys, declares this as intended behavior on Page 26 of the Sentinel End User Guide:

http://www2.safenet-inc.com/support/files/SafeNet_Sentinel_EndUser_Guide.pdf

> Using Key through Remote Desktop or Terminal Server
>
> Please Note that if you attempt to run a Sentinel Key protected application in standalone mode via a remote client (Terminal Server, VNC, WinXP remote client...), the software protected with Sentinel keys will not allow this for security reasons if application is protected in Standalone mode. You will either need to run the software while directly logged into the machine, or need to get in touch with you software vendor for software protected in Network mode.

TEST – To confirm that Remote Desktop is the cause of the License Error, log into the PC directly and try launching TracePro without using Remote Desktop.

RESOLUTION – TracePro can be run from Remote Desktop with a Network License Key. Contact sales@lambdares.com to request a change from a Single-computer License Key to a Network License Key.

S5 - USB Port Failure

PROBLEM – The TracePro License Key may be connected to a USB Port on the PC that is disabled or failing.

TEST – To test the PC's USB port, connect another USB device (mouse, keyboard, USB memory stick) to the port, and see if that device works properly.

RESOLUTION – Connect the TracePro License Key to a working port on the PC.

S6 - Key Failure / Programming Error

PROBLEM – It is possible that the License key is failing or has been misprogrammed.

TEST - There is file named TraceProLicenseKey.log that is generated each time you click "Cancel" in the License Information dialog to help us to troubleshoot problems like this. Please connect the problem key, launch TracePro, then hit Cancel to get out of the endless loop in the TracePro License Information dialog. This should generate the log file in one of the following locations:

Windows XP - C:\Documents and Settings\<USERNAME>\Application Data\Lambda Research Corporation\TracePro
Windows Vista and Windows 7 - C:\Users\<USERNAME>\AppData\Roaming\LambdaResearch Corporation\TracePro

Send the TraceProLicenseKey.log file to support@lambdares.com to enable us to determine if the key is functioning and is programmed correctly.

RESOLUTION - TBD

S7 – Conflict with another Sentinel Key

PROBLEM – If another Sentinel Key is connected to the PC, TracePro may be reading the non-TracePro key.

TEST – None

RESOLUTION – Remove all other Sentinel Keys from the PC, then try launching TracePro.

S8 – Additional Information

Additional troubleshooting information is available in the Sentinel End User Guide:

> http://www2.safenet-inc.com/support/files/SafeNet_Sentinel_EndUser_Guide.pdf

Network License Troubleshooting

N1 - Sentinel System Drivers are failing/not installed

PROBLEM – Sentinel System Drivers from SafeNet enable the communication between TracePro and the License Key. These drivers are included in the TracePro installation, but the license server may not have TracePro installed, or for some other reason they may not have installed properly, or they may be installed but not be functioning properly.

TEST – When the Sentinel Drivers are installed, there are actually two separate services installed. The "Sentinel Keys Server controls Single-computer (a.k.a standalone) keys, while the Sentinel Protection Server controls Network keys. Select Control Panel / Administrative Tools / Services / Sentinel, and the two services should be on the list. Verify that the "Status" for Sentinel Protection Server is "Started".

RESOLUTION #1 – If the Sentinel Protection Server appears on the list of services, right-click on Sentinel Protection Server and select "Stop", then right-click again and click "Start" to manually start the service.

RESOLUTION #2A – If the Sentinel Protection Server does not appear on the list of services, download and run the latest Sentinel Protection Installer from the SafeNet website:

http://www.safenet-inc.com/support_and_downloads/download_drivers/sentinel_drivers.aspx

RESOLUTION #2B – If the Sentinel Protection Server does not appear on the list of services even after downloading and installing the drivers, download and run the SSD Cleanup Utility from the same webpage, then try again to run the Sentinel Protection Installer. Please note that the cleanup utility also uninstalls TracePro and any other applications that have installed the Sentinel drivers, so TracePro will need to be reinstalled.

N2 - Key not updated for latest Software Release

PROBLEM - TracePro Releases like TracePro 7.0.0 are always of the format Major.Minor.Dot. When the key is updated to run a specific release, it will run all the dot releases of that series. If a Major or Minor release is installed, the key needs to be updated with the license information for that release.

TEST - There is file named TraceProLicenseKey.log that is generated each time you click "Cancel" in the License Information dialog to help us to troubleshoot problems like this. Please connect the problem key to the Server, launch TracePro 7.0, then hit Cancel to get out of the endless loop in the TracePro License Information dialog. This should generate the log file in one of the following locations:

Windows XP - C:\Documents and Settings\<USERNAME>\Application Data\Lambda Research Corporation\TracePro

Windows Vista and Windows 7 - C:\Users\<USERNAME>\AppData\Roaming\LambdaResearch Corporation\TracePro

Open TraceProLicenseKey.log in a text editor, and view line 9. If it reads "9: 70", that means the key is currently programmed for TracePro 7.0.

RESOLUTION - To obtain an updated license, you must provide us with a Locking Code. Please follow the steps in the section of this Installation Guide titled "Requesting/Updating Licenses".

N3 - Network license(s) are already in use

PROBLEM – This error message will appear if the Network license(s) are already in use.

TEST – To determine if the license(s) are already in use, click OK to this error message to return to the TracePro License Information dialog, select the License Info button, and verify that the Key# is recognized but the number of licenses available is 0.

RESOLUTION – Launch TracePro at a later time once the Network License is available. To determine which user(s) is using the license, please see the section titled "Monitoring Network License Usage" for information about the Sentinel License Monitoring Tool.

N4 - Selecting Network license when a Single-computer Key is connected

PROBLEM - This error message will appear if a Single-computer License Key is connected to the PC, but the Network license option has been selected in the TracePro License Information dialog.

TEST/RESOLUTION - Click OK to this error to return to the TracePro License Information dialog, then select the Single-computer option

N5 - Ports 6001 or 6002 are blocked or are already in use

PROBLEM – [Note: this problem cannot occur if the Network Key is connected to the same PC that is running TracePro] The key communicates over the network using Ports 6001 and 6002. Communication over these ports may be blocked by a firewall, or another service might already be using these ports for communication.

TEST #1 (preliminary test that provides some information) – Disconnect the Key from the Server, and connect it directly to the PC that is running TracePro. Launch TracePro, and when prompted to enter the ServerName in the TracePro information dialog, enter the name of your computer. If TracePro launches successfully, that eliminates N2, N3, N4, and N7 as possible causes, leaving N1, N5, and N6 on the Server PC as possible causes.

TEST #2 - It is recommended that you contact your IT staff to determine if the firewall is blocking communication through Port 6001 or 6002

TEST #3 – To determine if Port 6001 is in use by another application, please generate a STATS.txt file by following these steps:

- Open the command prompt window
- type in the command netstat -a -b > stats.txt
- the STATS.txt will be created and saved to the Root drive
- review STAT.txt to see if any application is using Port 6001 or 6002

RESOLUTION #1 - If the results of TEST #2 conclude that the firewall communication through Ports 6001 and 6002, it is recommended that you contact your IT staff to create the necessary firewall exceptions.

RESOLUTION #2 - If the results of TEST #3 conclude that another application is using Ports 6001 or 6002, one possible options is to turn OFF the "autostart" feature to both the Sentinel Protection Server, and the conflicting service (Control Panel / Administrative Tools / Services /), and turn each service ON manually only when they are needed.

NOTE #1 - Port 6001 is known to be used by LabVIEW, a software program available from National Instruments:

> http://digital.ni.com/public.nsf/allkb/F852A8CFA4A8CABE862571C00068EF7C

NOTE #2 - Users of TracePro Single-computer License Keys may see a Sentinel Service error message each time they reboot. This occurs when Port 6001 is in use by another application, and the Sentinel System Drivers have installed both the Single-computer and Network services. This conflict does not stop the TracePro Single-computer License Key from functioning. The resolution of this problem is to turn off the "Network" service. Select Control Panel / Administrative Tools / Services / Sentinel, right-click on "Sentinel" Protection Server" to Stop the service. It is also recommended that the automatic startup of this service be turned off.

N6 - USB Port Failure

PROBLEM – The TracePro License Key may be connected to a USB Port on the PC that is disabled or failing.

TEST – To test the PC's USB port, connect another USB device (mouse, keyboard, USB memory stick) to the port, and see if that device works properly.

RESOLUTION – Connect the TracePro License Key to a working port on the PC.

N7 - Key Failure / Programming Error

PROBLEM – It is possible that the License key is failing or has been misprogrammed.

TEST - There is file named TraceProLicenseKey.log that is generated each time you click "Cancel" in the License Information dialog to help us to troubleshoot problems like this. Please connect the problem key, launch TracePro, then hit Cancel to get out of the endless loop in the TracePro License Information dialog. This should generate the log file in one of the following locations:

Windows XP - C:\Documents and Settings\<USERNAME>\Application Data\Lambda Research Corporation\TracePro
Windows Vista and Windows 7 - C:\Users\<USERNAME>\AppData\Roaming\LambdaResearch Corporation\TracePro

Send the TraceProLicenseKey.log file to support@lambdares.com to enable us to determine if the key is functioning and is programmed correctly.

RESOLUTION - TBD

N8 – Mispelled/Incorrect ServerName in License Information dialog

PROBLEM – TracePro cannot communicate with the Network License Key if the Server Name entered in the TracePro License Information dialog is misspelled or is a not the name of the PC where the key resides.

TEST – None

RESOLUTION – Confirm the name of the Server, and confirm that the TracePro Key is connected to that Server.

N9 – No Network Connection to Server

PROBLEM – TracePro cannot communicate with the Network License Key if the Network connection is not working.

TEST – It is recommended that you contact your IT rep and ask that they "ping" the server from your PC.

RESOLUTION – Correct the Network connection problem.

N10 – Unlicensed Edition of TracePro selected

PROBLEM – There are 3 editions of TracePro available – Expert, Standard, and LC. When TracePro is launched and the Network License option is chosen, the user is prompted to choose the edition. If an unlicensed edition is selected, the Network License Error Message will appear.

TEST – None

RESOLUTION – Launch TracePro again, then select an edition that is licensed.

N11 – Conflict with another Sentinel Key

PROBLEM – If another Sentinel Key is connected to the PC, TracePro may be reading the non-TracePro key.

TEST – None

RESOLUTION – Remove all other Sentinel Keys from the PC, then try launching TracePro.

N12 – Additional Information

Additional troubleshooting information is available in the Sentinel End User Guide:

http://www2.safenet-inc.com/support/files/SafeNet_Sentinel_EndUser_Guide.pdf

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Temporary License Troubleshooting
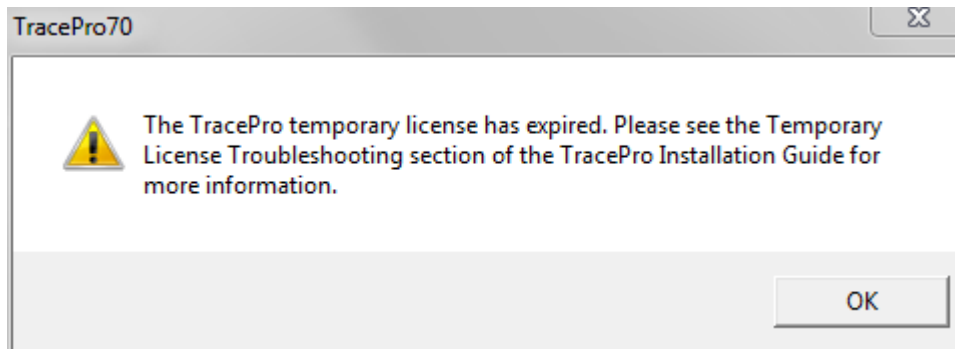
T1 - Expired License

PROBLEM – In general, the "Trial Time Out!" message indicates that the OSLO/TracePro Key was programmed with a temporary license, and that license has now expired.

TEST – None

RESOLUTION – To obtain an updated license, you must provide us with a Locking Code. Please follow the steps in the section titled "Requesting/Updating Licenses".

T2 - Expired Trial License and Single-computer License Key not found

PROBLEM – If you at one time in the past performed a 30-Day-Trial of TracePro (which uses a Software Key rather than a Hardware Key), and the PC is failing to recognize the Single-computer License Key, TracePro will revert to try to use the Software Key Trial License, and display this message because that Trial License has already expired.

TEST – Click OK to this error message, and then the TracePro single-computer license key not found on this computer appears.

RESOLUTION – Follow the steps to resolve the "TracePro single-computer license key not found on this computer" message, the Trial Time Out message is not relevant.

T3 - Clock Tampering

PROBLEM – TracePro uses the Date and Time from the PC's System Clock to determine the expiration date for a temporary license. The software has logic to detect when the System Clock has been tampered, and it will behave as if the license has expired.

TEST – None

RESOLUTION – The resolution of this problem is to return the key to Lambda Research for reprogramming. Please send notification to license@lambdares.com before returning the key. Lambda Research does not accept responsibility for shipping costs when the key needs to be reprogrammed under these circumstances.

Field Exchange Utility Errors

F1 - Sentinel System Drivers are failing/not installed

PROBLEM – Sentinel System Drivers from SafeNet enable the communication between TracePro and the License Key. These drivers are included in the TracePro installation, but the license server may not have TracePro installed, or for some other reason they may not have installed properly, or they may be installed but not be functioning properly.

TEST – When the Sentinel Drivers are installed, there are actually two separate services installed. The "Sentinel Keys Server controls Single-computer (a.k.a standalone) keys, while the Sentinel Protection Server controls Network keys. Select Control Panel / Administrative Tools / Services / Sentinel, and the two services should be on the list. Verify that the "Status" for Sentinel Protection Server is "Started".

RESOLUTION #1 – If the Sentinel Protection Server appears on the list of services, right-click on Sentinel Protection Server and select "Stop", then right-click again and click "Start" to manually start the service.

RESOLUTION #2A – If the Sentinel Protection Server does not appear on the list of services, download and run the latest Sentinel Protection Installer from the SafeNet website:

http://www.safenet-inc.com/support_and_downloads/download_drivers/sentinel_drivers.aspx

RESOLUTION #2B – If the Sentinel Protection Server does not appear on the list of services even after downloading and installing the drivers, download and run the SSD Cleanup Utility from the same webpage, then try again to run the Sentinel Protection Installer. Please note that the cleanup utility also uninstalls TracePro and any other applications that have installed the Sentinel drivers, so TracePro will need to be reinstalled.

F2 - USB Port Failure

PROBLEM – The TracePro License Key may be connected to a USB Port on the PC that is disabled or failing.

TEST – To test the PC's USB port, connect another USB device (mouse, keyboard, USB memory stick) to the port, and see if that device works properly.

RESOLUTION – Connect the TracePro License Key to a working port on the PC.

F3 – Conflict with another Sentinel Key

PROBLEM – If another Sentinel Key is connected to the PC, the Field Exchange Utility may have read the non-TracePro key when generating the Locking Code or it may be attempting to update the non-TracePro Key.

TEST – None

RESOLUTION – Remove all other Sentinel Keys from the PC, then send another Locking Code to license@lambdares.com to initiate the process of updating the key again.

F4 - Key Failure / Programming Error

PROBLEM – It is possible that the License key is failing or has been misprogrammed.

TEST - There is file named TraceProLicenseKey.log that is generated each time you click "Cancel" in the License Information dialog to help us to troubleshoot problems like this. Please connect the problem key, launch TracePro, then hit Cancel to get out of the endless loop in the TracePro License Information dialog. This should generate the log file in one of the following locations:

Windows XP - C:\Documents and Settings\<USERNAME>\Application Data\Lambda Research Corporation\TracePro
Windows Vista and Windows 7 - C:\Users\<USERNAME>\AppData\Roaming\LambdaResearch Corporation\TracePro

Send the TraceProLicenseKey.log file to support@lambdares.com to enable us to determine if the key is functioning and is programmed correctly.

RESOLUTION – TBD

F5 – Additional Information

Additional troubleshooting information is available in the Sentinel End User Guide:

http://www2.safenet-inc.com/support/files/SafeNet_Sentinel_EndUser_Guide.pdf

Installation Troubleshooting

I1 – Conflict with another application using Port 6001 or 6002

PROBLEM – The TracePro Installation is also installing the Sentinel Drivers that TracePro uses to communicate with the hardware key. The Sentinel Installation makes changes to the settings for Ports 6001 and 6002, these are the ports that are used for communication with the Sentinel Hardware Key. If another application is accessing these ports during the Sentinel portion of the installation, the entire TracePro installation will fail.

TEST #1 – Port 6001 is known to be used by LabVIEW, a software program available from National Instruments:

http://digital.ni.com/public.nsf/allkb/F852A8CFA4A8CABE862571C00068EF7C

TEST #2 – To determine if Port 6001 is in use by another application, please generate a STATS.txt file by following these steps:
- Open the command prompt window
- type in the command netstat -a -b > stats.txt
- the STATS.txt will be created and saved to the Root drive
- review STAT.txt to see if any application is using Port 6001 or 6002

RESOLUTION (perform these steps only at a time when the connection to the conflcting application can be disrupted)
- from the Windows Control Panel select Administrative Tools/Services
- on the alphabetical list of services, right-click on each conflicting service and STOP the service. (for LabView, look for anyservices with names that start with "National" or "NI", or "Lookup Citadel Server")
- install TracePro
- back in Control/Administrative Tools/Services, right-click and START each of conflicting services